A.A.R. MECHANICAL AND P & S DIVISIONS MEETINGS

AUGUST 3, 1946

Railway Age

Founded in 1856

McCARTNEY LIBRARY
GENEVA COLLEGE

2000 hp "Workhorse"

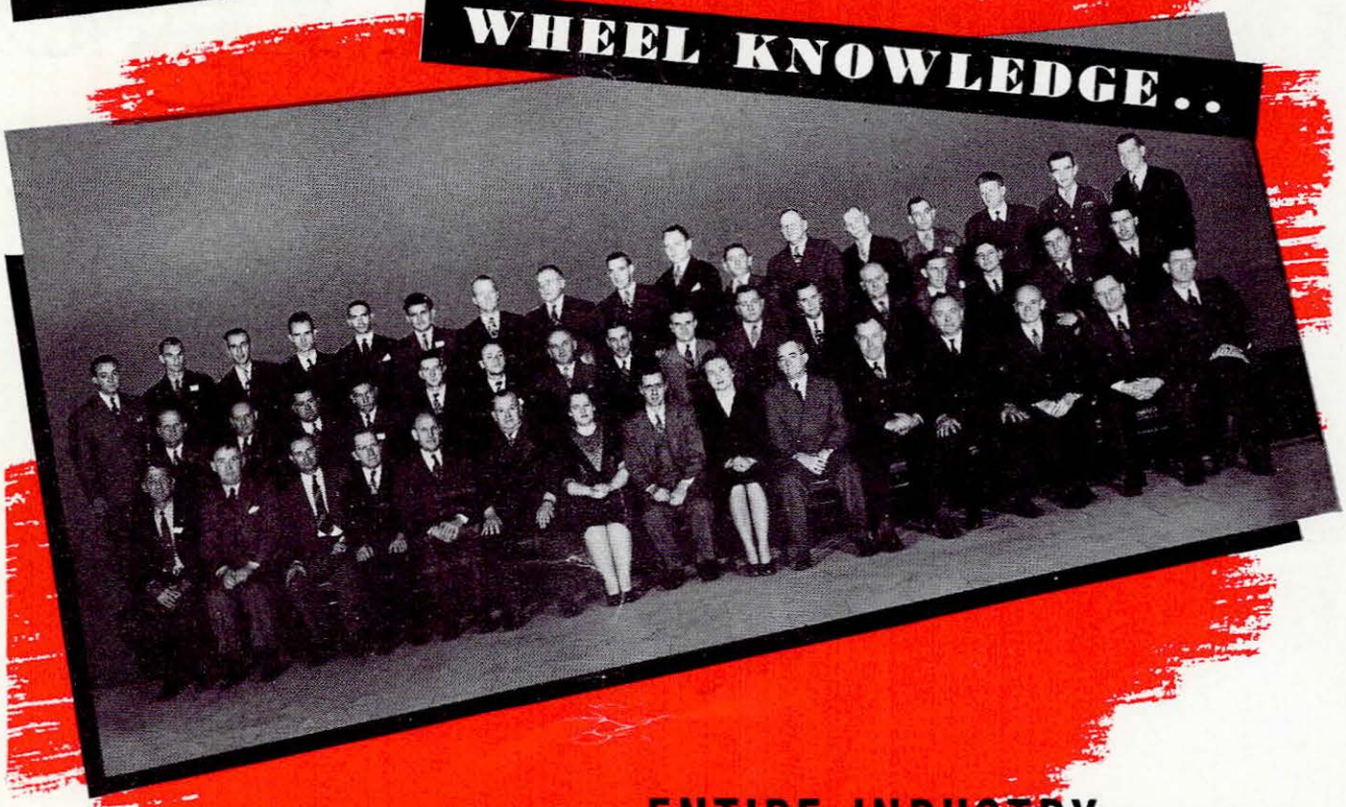
FOR ROAD AND TRANSFER SERVICE

Another pioneer development in a long chain of Baldwin firsts, this locomotive incorporates many new design features. Starting tractive effort: 105,000 lb. at 30% adhesion. Continuous tractive effort rating at 9.5 m.p.h.: 62,250 lb. Maximum restricted speed: 60 m.p.h. If you have a heavy haulage problem . . . ask for further details.

The Baldwin Locomotive Works, Philadelphia 42, Pa., U.S.A. Offices: Philadelphia, Chicago, St. Louis, Washington, New York, Boston, San Francisco, Birmingham, Houston, Cleveland, Detroit, Pittsburgh, Norfolk.

BALDWIN

they pool their WHEEL KNOWLEDGE..



...and the ENTIRE INDUSTRY gains

These resident inspectors and their assistants have an important job to do. They work for the Association of Manufacturers of Chilled Car Wheels. At regular intervals they hold meetings to keep themselves up to date on inspection practices throughout the country. From their pooled knowledge come benefits not only to the car wheel industry but to the entire railroad field.

As a result of its uninterrupted program of activities — a progressive program marked by ever-advancing standards of testing and checking techniques — AMCCW realizes its original three-fold aim of uniform specifications, uniform inspection, uniform product.

These inspectors come together from posts in individual plants of AMCCW members. Each makes his headquarters with a leading wheel manufacturer — one who has voluntarily agreed to be bound by the Association's rigid code. From a system of uniform reports and constant supervision by a corps of traveling general inspectors, AMCCW personnel succeed in adding a wide, universal viewpoint to the specific jobs of helping highly responsible manufacturers to maintain wheel quality.

ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

230 PARK AVENUE, NEW YORK 17, N. Y. • 445 NORTH SACRAMENTO BOULEVARD, CHICAGO 12, ILL.

Organized to achieve: Uniform specifications — Uniform inspection — Uniform product

4688

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 121, No. 5.

"Slept like a kid— feel like a million"

When he steps from the train looking crisp, efficient, alert, it's a pretty sure sign that he feels like a million. Slept like a kid, and he'll probably mention what a smooth ride it was.

For smoothness means all the difference between a pleasant, restful trip and one that leaves you tired out, your nerves on edge.

As the postwar passenger cars take the rails, there'll be more and more talk about their smooth-riding qualities. Bethlehem wrought-steel wheels will be specified equipment on many of these cars, for a Bethlehem wheel is a smooth-running wheel—one that helps insure a comfortable ride for the passenger.

Toughness and durability are other vital features of these wheels—features built in by the Bethlehem forging, rolling, and heat-treating processes. This ruggedness means extra life . . . extra mileage . . . fewer replacements and lower maintenance.

Specify Bethlehem wrought-steel wheels and their running-mates, Bethlehem forged-steel axles. You will find them an excellent investment—not only in passenger comfort, but in solid savings too.

BETHLEHEM WROUGHT-STEEL WHEELS and FORGED-STEEL AXLES

Let's X-Ray an Earthworm...

and look at maintenance!

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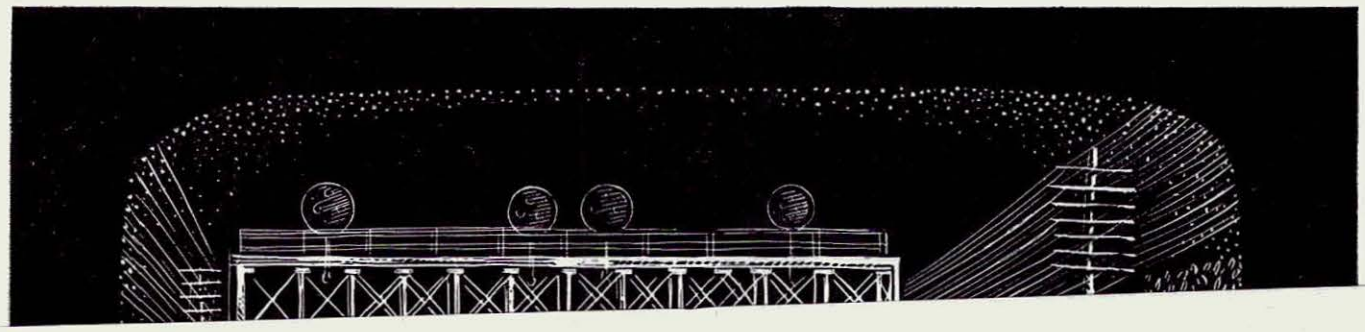
BETHLEHEM WROUGHT-STEEL WHEELS and FORGED-STEEL AXLES

performance.

NATIONAL ALUMINATE CORPORATION
6216 W. 66th Place • Chicago 38, Illinois
Canadian inquiries should be addressed to Aluminate Chemicals, Ltd., 555 Eastern Avenue, Toronto, Ontario



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BETHLEHEM WROUGHT-STEEL WHEELS and FORGED-STEEL AXLES

OUR "RIGHT OF WAY"

From the early ornate, carpeted, sleeping cars to the modern functional streamliner with smartly designed individual roomettes, railway equipment has been influenced by the public's desire for comfort.

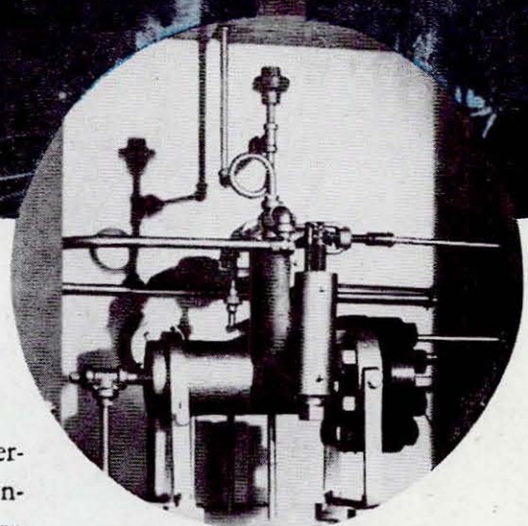
During this period of development and growth, Safety Company experience has been a sure *"right of way"* to progressive improvement and most efficient performance. Safety Company pioneering has been soundly based on knowledge of railway requirements. This is due not alone to its 60 years experience in designing and manufacturing car lighting, generator and air conditioning equipment, but through actual maintenance of equipment in service, for many of America's foremost carriers.

This practical field experience is reflected in the efficient performance of Safety Company equipment. It is assurance that you will continue to get the best when you *"STANDARDIZE WITH SAFETY."*

THE SAFETY CAR HEATING AND LIGHTING COMPANY INC.

NEW YORK · CHICAGO · PHILADELPHIA · ST. LOUIS · BOSTON · SAN FRANCISCO · MONTREAL

life insurance for locomotive boilers



• This is one of the high pressure test boilers, used in the development of new water treatment chemicals and methods in the Nalco Laboratories.

NALCO System life insurance for locomotive boilers is a three-way combination of water treatment research, controlled chemical production and continuous field service. Wherever Nalco-conditioned locomotives operate, this triple service combination is at work to help railroads get maximum performance and longer effective life from locomotive boilers. Conservative estimates of actual cash savings resulting from modern water treatment practices on a single Nalco-serviced railroad are in excess of *two and one-half million* dollars each year . . . A real "dividend" on boiler life insurance!

Nalco D—steam conditioner for locomotive boilers . . . This product of Nalco research is making a vital contribution to railroad operation in improved locomotive performance.

NATIONAL ALUMINATE CORPORATION

6216 W. 66th Place • Chicago 38, Illinois

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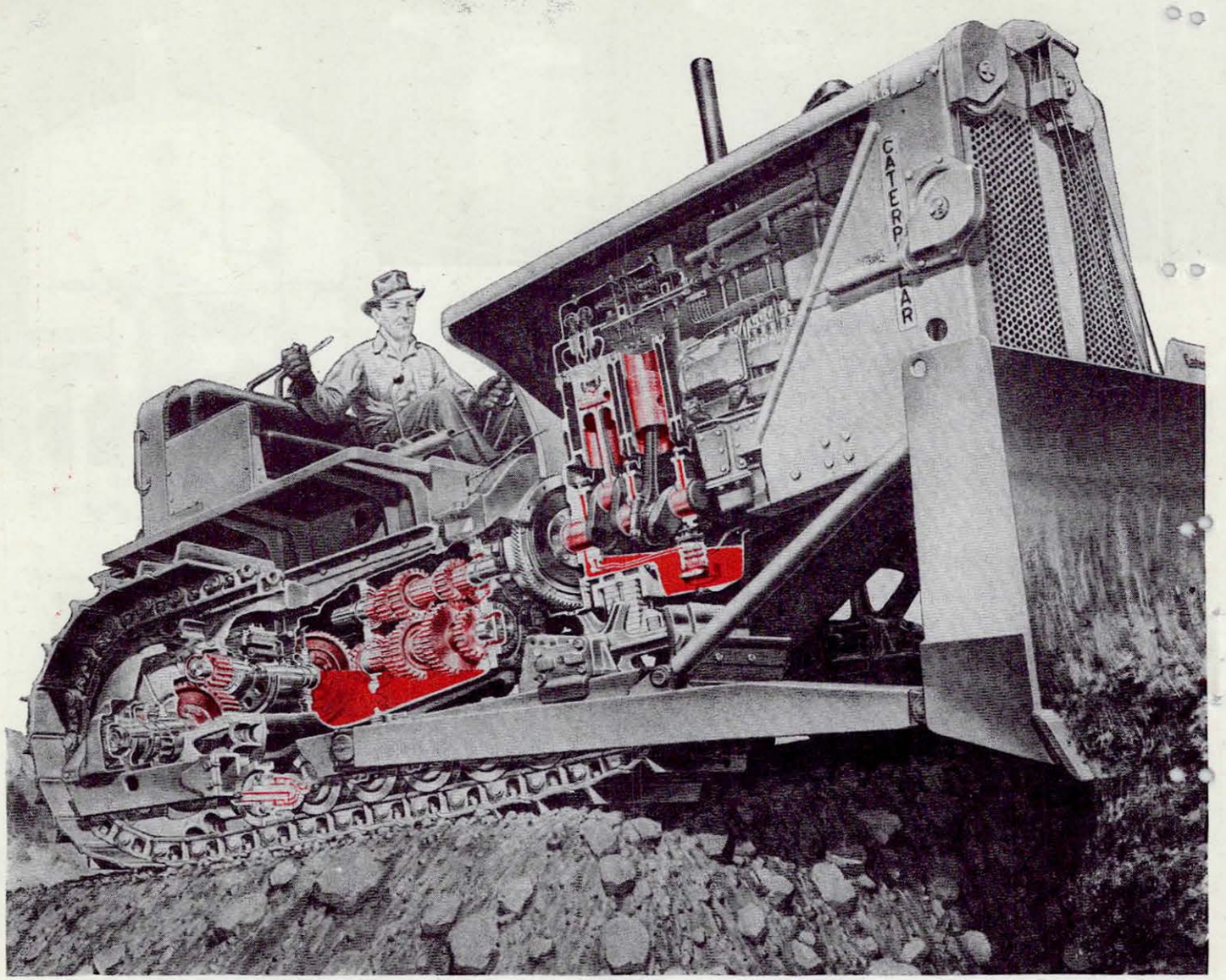
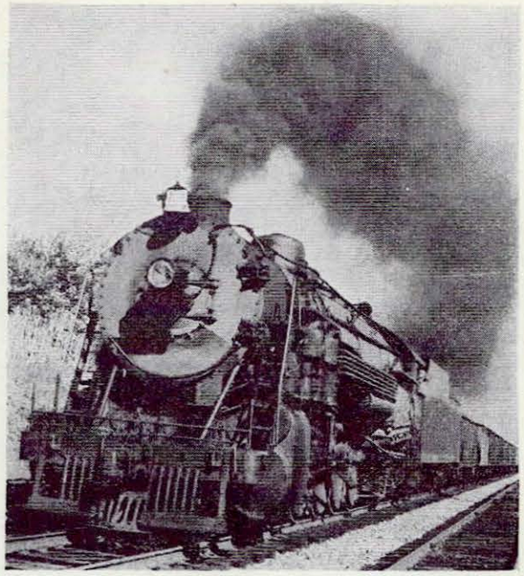


The cutaway drawing at left gets "under the skin" of a heavy-duty Caterpillar Diesel, widely used in the never-ending job of improving railroad service. It points out the vital importance of Correct Lubrication, not only here, but in all railroad equipment.

For efficient, long-time operation, those piston rings and pistons must be protected against lacquer and hard carbon deposits. Scuffing must be prevented, wear reduced. Crankcases should remain free of deposits which would impair lubrication of bearings. Delvac "900 Series" Oils meet these requirements. They have remarkable ability to seal, lubricate, and keep rings, pistons and crankcases free from deposits that affect performance.

The transmission and final drive gears and bearings carry heavy shock loads. Mobiloil CW protects their surfaces, resists heat and thickening. The track rollers pose still other problems. Mobilgrease No. 2 (for Summer) and Mobilgrease Track Roller (Winter) reduce wear, resist the effects of water, dust and sand.

Get these proved lubricants now and give your tractor a longer, healthier life.



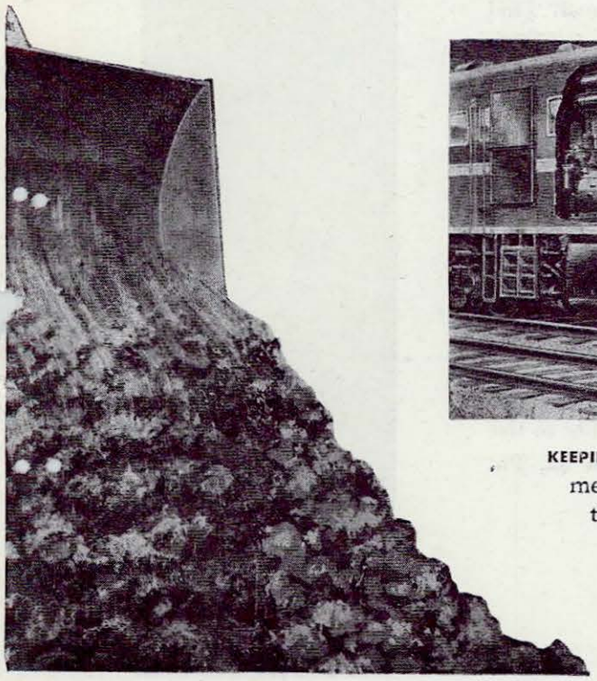
STEAM LOCOMOTIVES, TOO! Socony-Vacuum specialized railroad lubricants keep locomotives on the job, reduce wear, cut maintenance costs. Latest developments are the new Gargoyle Etna 700 Series Oils for air pumps. They give maximum resistance to harmful deposits — protect vital parts.

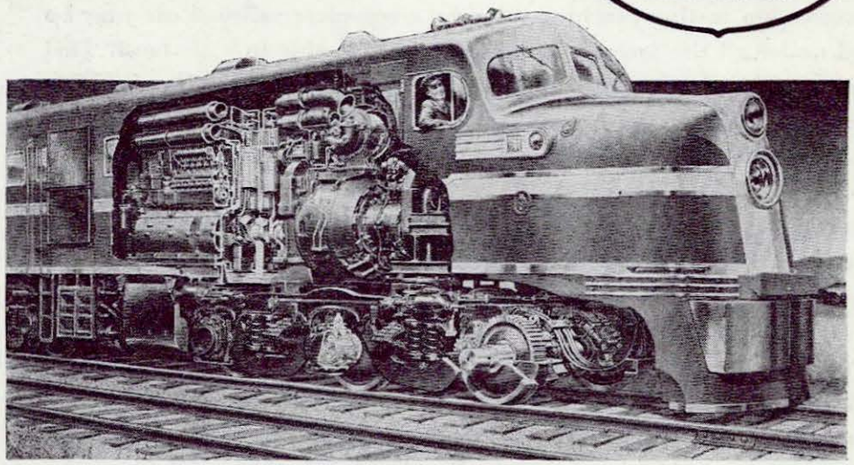
Socony-Vacuum Oil Co., Inc.

and Affiliates: Magnolia Petroleum Company, General Petroleum Corporation

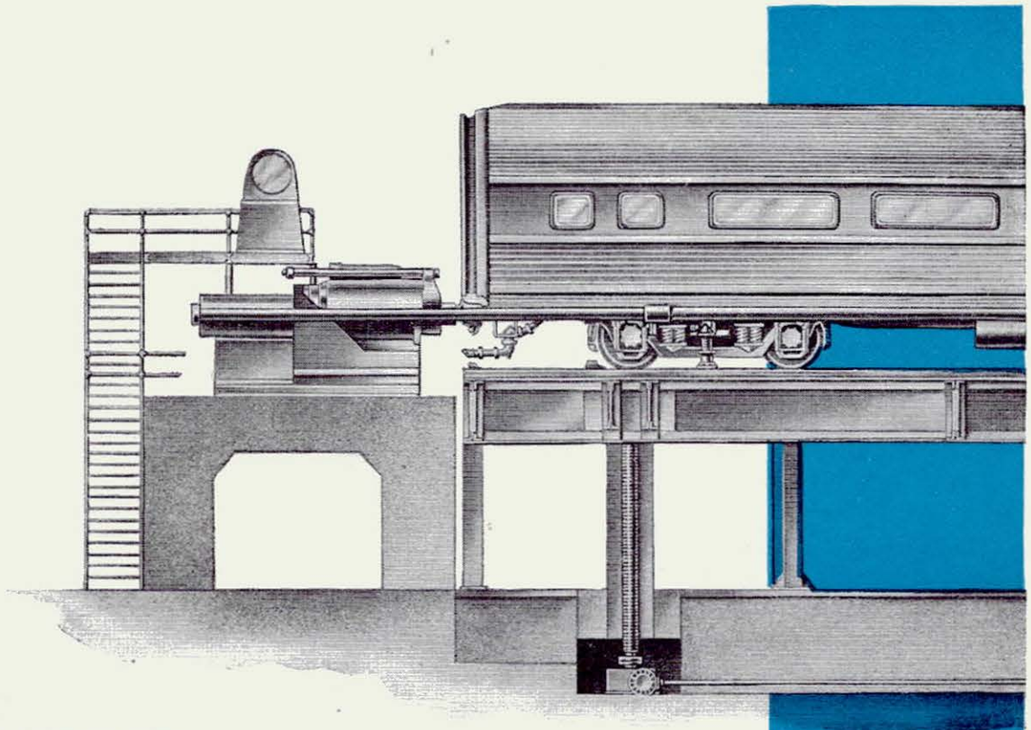
GARGOYLE

Railroad Lubricants





KEEPING PACE WITH DIESEL PROGRESS! Big Diesel mainliners like this mean special problems for oil. Gargoyle D.T.E. Oil stands up under the heat and pressure in the cylinders, resists formation of hard carbon deposits. It keeps rings and valves clean, forms a tight piston seal. Other Socony-Vacuum lubricants protect pinions and gears; give dependable service in axle roller bearings.



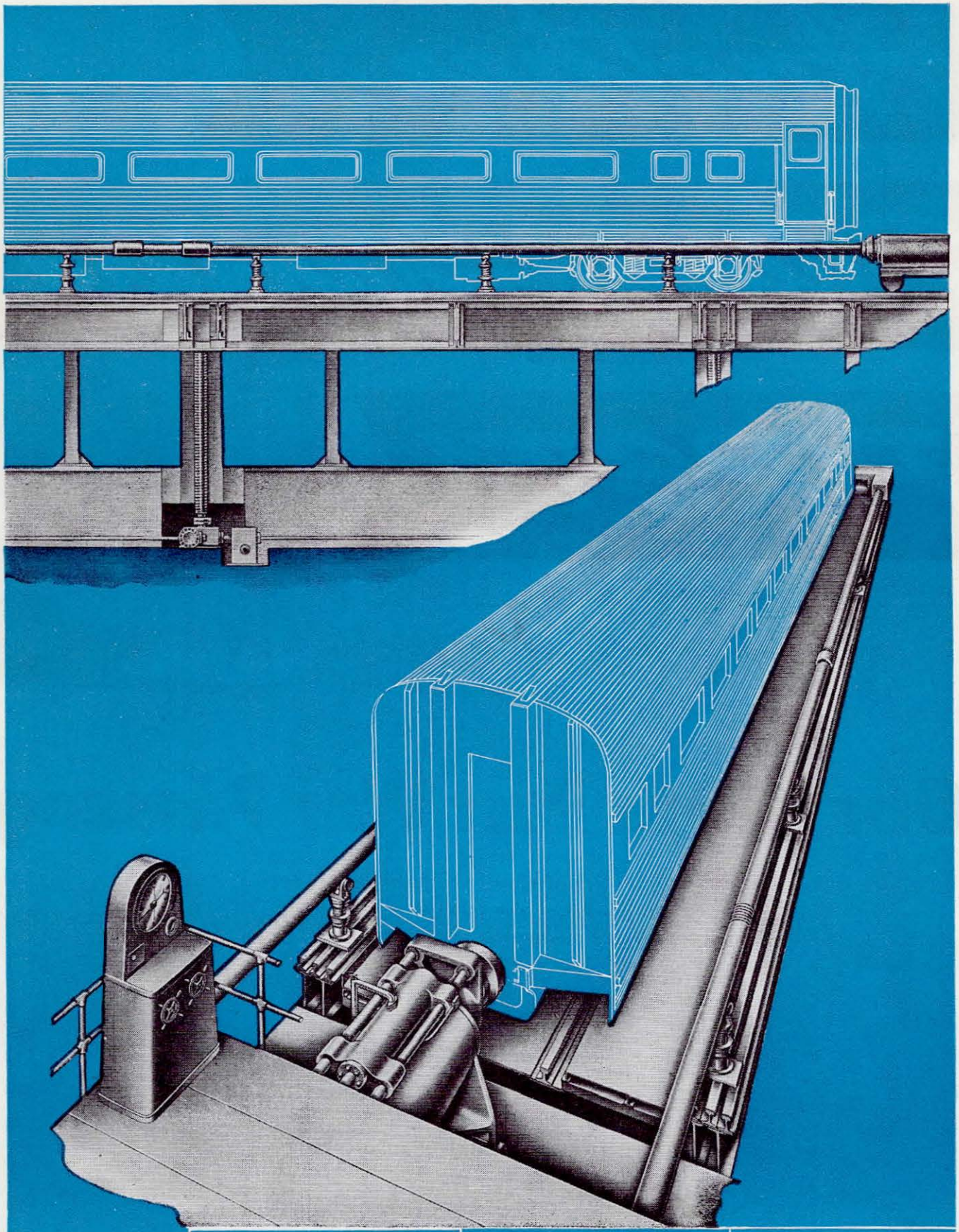
THE GREAT STRENGTH OF BUDD CARS IS *Proved*

In the construction of Budd cars advanced scientific engineering practice is supplemented by actual physical tests in the most modern car testing plant in the world—the only one of its kind. This plant is equipped with a compression testing machine whereby a complete railroad car may be tested under all the forces which a car must be able to withstand. This machine can push anywhere on the ends of a car up to 2 million pounds capacity. Transverse and torsional loads can also be applied to the sides, top and bottom. Modern electrical and mechanical instruments measure strains on ends, roof, sides and floor. Four hundred and eighty readings can be made in 10 minutes.

The Budd Test Plant also has special equipment and fixtures including vibration machines for testing separate elements of the car structure. The tests are made by personnel thoroughly trained in car testing and results are analyzed by a group of engineers with many years' experience in this work. No other car builder has had as much experience in car testing, nor has as much complete and technically accurate data on car strength.

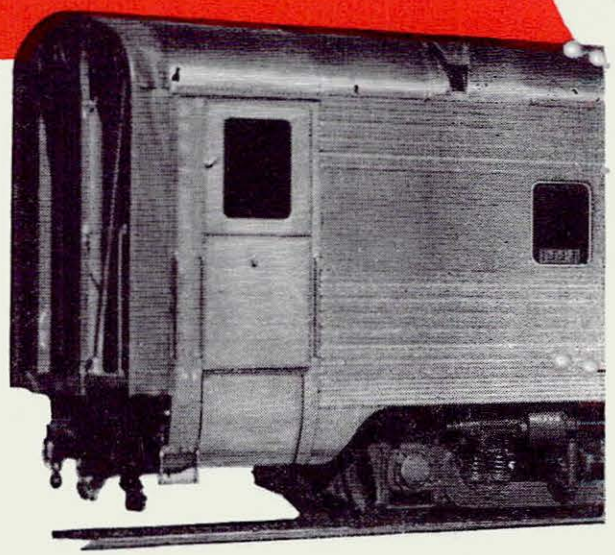
These test data and facilities of the Budd Test Plant are available to the railroads. The Budd Company, Railway Division, Philadelphia 32, Pa.

Budd



THE BUDD COMPANY PHILADELPHIA, PA.	TESTING MACHINE	DRAWING NO. BD-1012 DATE: MAY 2, 1946
DETROIT CHICAGO WASHINGTON NEW YORK ST. LOUIS SAN FRANCISCO		DRAWN JW / APPROVED WGD

Another Pullman-Standard "FIRST"



Our 100th Post War Passenger

Proof again of Pullman-Standard's production know-how was the recent completion of our 100th postwar passenger car.

The chaotic material supply situation required a high degree of ingenuity and coordination to turn out this quantity of cars—a record that has not been equalled elsewhere.

Pullman-

CHICAGO · NEW YORK

car was delivered JULY 13th

Our production facilities and personnel are geared to rapid output—our engineering staff is organized to move quickly—our purchasing department has vast experience in the procurement of materials.

WE HAVE THE CAPACITY TO FILL YOUR PASSENGER CAR ORDERS

Standard CAR MANUFACTURING COMPANY

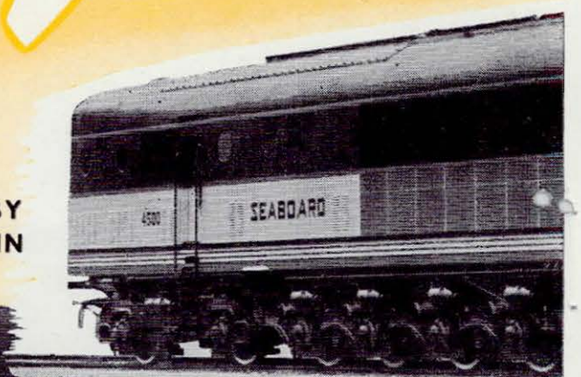
CLEVELAND · WASHINGTON, D. C. · PITTSBURGH · BIRMINGHAM · WORCESTER, MASS.

San Francisco Sales Representative, Mark Noble

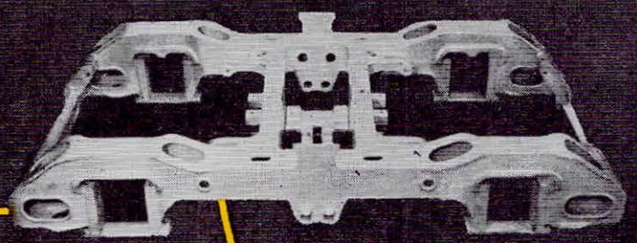
SEABOARD 3,000 H. P. SINGLE-

New

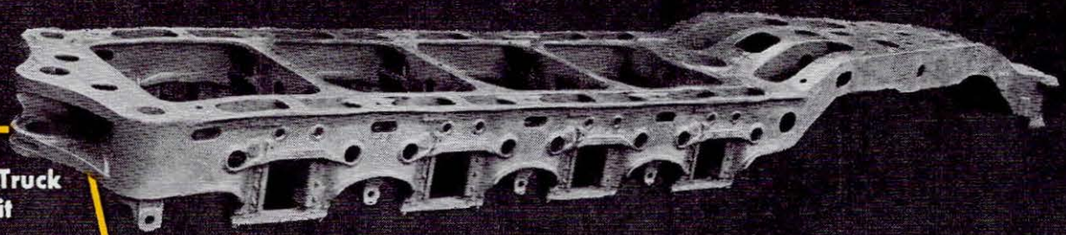
BUILT BY
BALDWIN



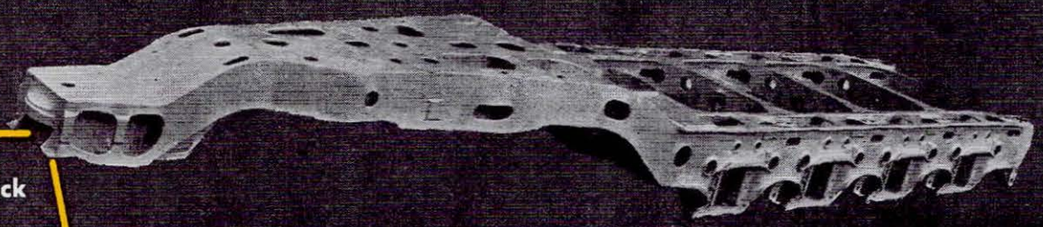
Rides on



Cast Steel 4-Wheel
Engine Truck Frame



Cast Steel Driving Truck
Bed—Front Unit



Cast Steel Driving Truck
Bed—Rear Unit

GENERAL STEEL

UNIT DIESEL-ELECTRIC

COMMONWEALTH

Truck Beds and Trucks

THE most powerful *single-unit* Diesel-electric built is this new Baldwin locomotive recently delivered to the Seaboard Air Line. Commonwealth Products have a most important part in this equipment, providing the same maintenance saving and operating advantages proven invaluable through years of service on other types of power.

COMMONWEALTH GUIDING TRUCKS have a strong cast steel one-piece truck frame with integral pedestals and all other essential parts combined in a unit having maximum strength and minimum weight.

COMMONWEALTH CAST STEEL DRIVING TRUCK BEDS—front and rear units—combine many structural and design features in one strong casting, eliminating many separate assembled parts.

Here is another example of one of the latest developments in motive power utilizing the advantages of Commonwealth Cast Steel Products.

CASTINGS

EDDYSTONE, PA.
GRANITE CITY, ILL.

COMPARISON PROVES SUPERIORITY

ONLY INSUTAPE CAN GIVE YOU THESE

INSUTAPE

Insutape steam pipe insulation has been providing the nation's railroads with fuel economies and greater insulating efficiency for over a quarter of a century. Pioneered by Union Asbestos, Insutape continues to set the pace in providing a higher degree of efficiency without sacrificing any of its proven application features!

. . . and here is a most significant point for you to consider when thinking about insulation — *most* foreign and U. S. (Army) government locomotives built in this country in the past five years has had Insutape applied. Those engines were equipped to achieve maximum fuel economy — and railroad men serving their government selected Insutape *every time!*

Insutape is the original insulation of this type — the insulation that was designed and engineered by and for railroad men to meet day-in, day-out operating problems.

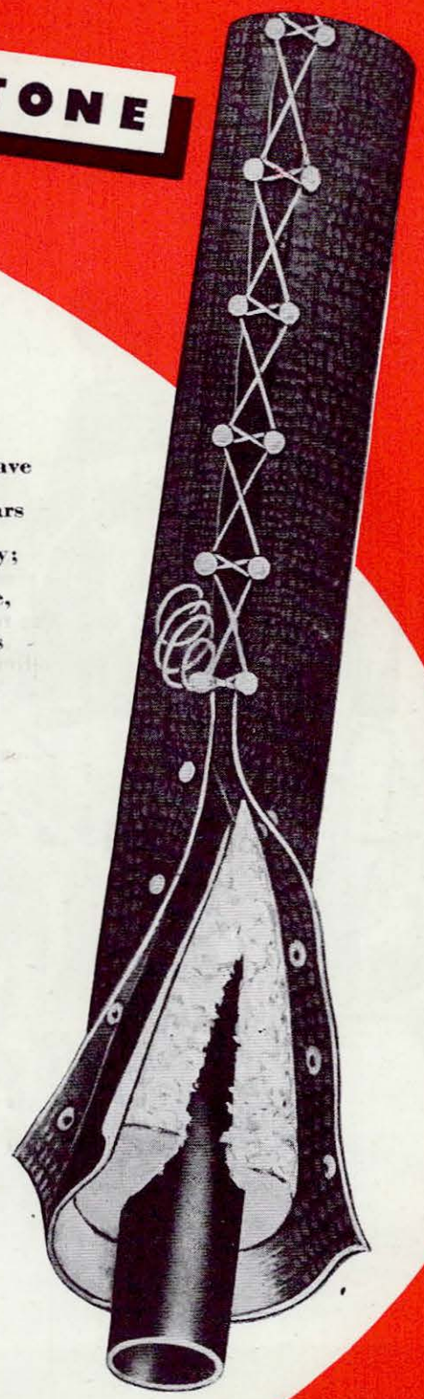
Why accept anything less than the real thing? . . .

332 SOUTH MICHIGAN AVE., CHICAGO 4, ILLINOIS

OF INSUTAPE AND WOVENSTONE

WOVENSTONE

AND WOVENSTONE INSULATION ADVANTAGES



Many Wovenstone steam pipe insulations have been in *continuous service* for 10 to 12 years and continue to give highest insulating efficiency; continue to fit snug and firm against the pipe, carrying steam at maximum temperatures with minimum fuel consumption.

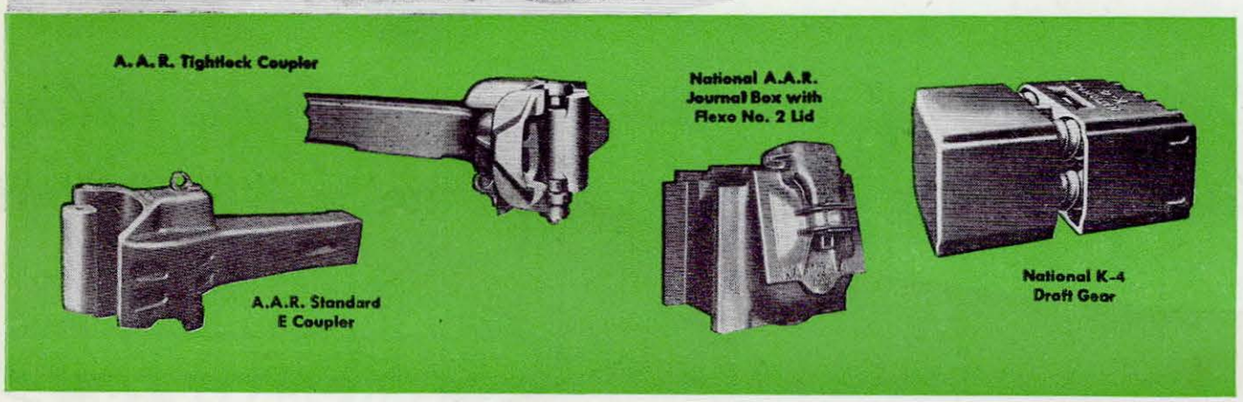
. . . and consider this — Wovenstone jacket and sealing laps are woven in one continuous piece—designed to prevent tearing or splitting— that's because Wovenstone is designed and engineered by men who have specialized in railroad insulation for over a quarter of a century — men who have lived with railroadings' heating problems for many years and then designed Wovenstone to overcome those problems . . . Yes, Wovenstone's outstanding service record, advanced one-piece design and engineering for greater heating efficiencies with consequent fuel economies and greater comfort to passengers.

Majority of new cars on order and delivered since the war are equipped with **WOVENSTONE.**

UNION ASBESTOS
MEANS PROGRESS IN INSULATION
AND RUBBER CO.

NEW YORK • SAN FRANCISCO

SINCE


A. A. R. Tightlock Coupler
A.A.R. Standard E Coupler
National A.A.R. Journal Box with Flexo No. 2 Lid
National K-4 Draft Gear

STAGECOACH DAYS

we've coupled SAFETY with SPEED

Even in the stagecoach days of 1868, speed was an important consideration. Yet safety was essential, especially over the hazardous roads and trails of those early days. The countless products which we supplied to these vehicle builders were designed and manufactured to meet these demands.

The same rigid adherence to these basic requirements is built into every "National" railroad product, today. In designs, in materials, in manufacturing methods and quality control, our engineers have always kept pace with, and led, the march of railroad progress toward speed and safety.

Yes, since 1868, we've built speed and safety into our transportation specialties. We'll continue to do so.

M&S Co
EST. 1868

NATIONAL

MALLEABLE AND STEEL CASTINGS COMPANY

CLEVELAND, OHIO

Sales Offices: Cleveland, Chicago, New York, Philadelphia, Richmond, San Francisco, St. Louis
Works: Cleveland, Chicago, Indianapolis, Melrose Park, Ill., Sharon, Pa.

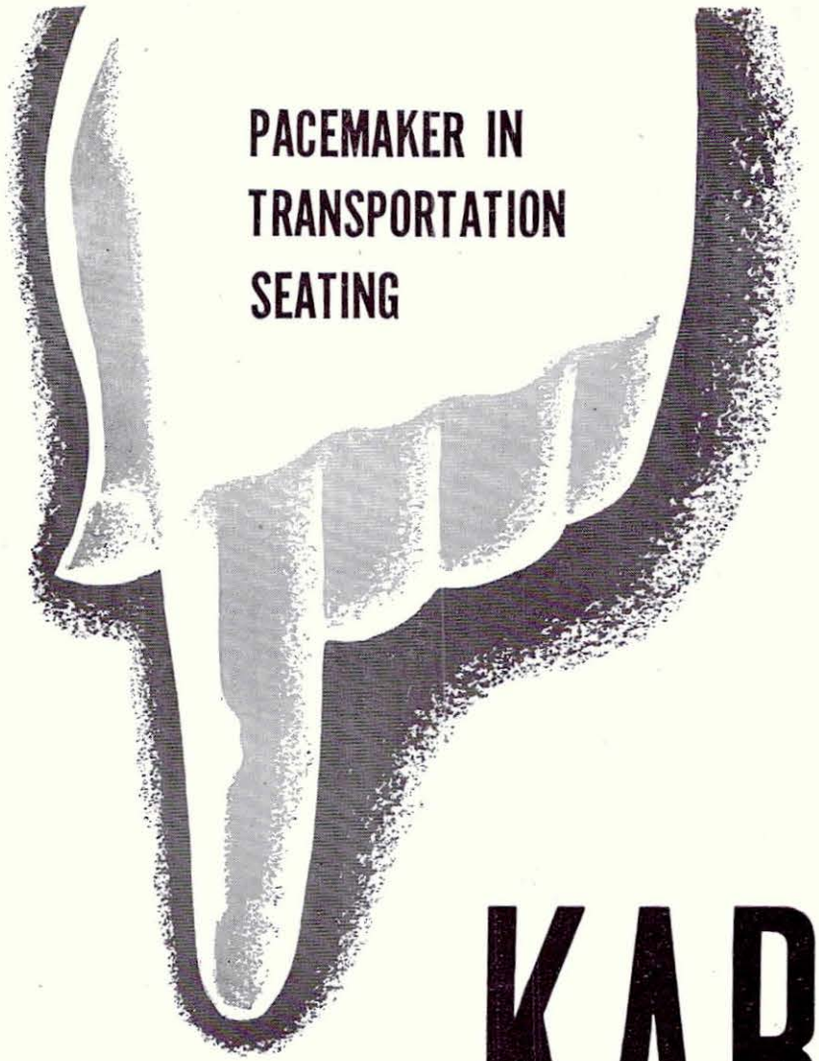
YOUR ASSURANCE of DEPENDABLE Signalware

The familiar Corning Glass Works Trademarks on railroad glassware are your assurance of dependable performance. Corning has spent years of research in glass which has led to important developments in glass composition, signalware design and production facilities to meet the exacting demands of Railroads.

Safety depends on Signal Glassware—Railroads depend on CORNING, *Corning Glass Works, Corning, New York.*

"CORNING," "PYREX," "MACBETH" and "CNX" are registered trademarks and indicate manufacture by Corning Glass Works, Corning, New York

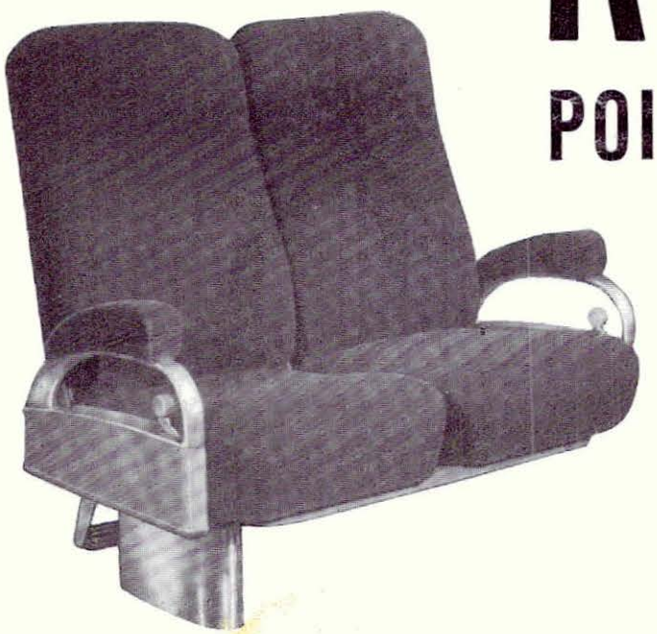
CORNING
means
Research in Glass



PACEMAKER IN
TRANSPORTATION
SEATING

KARPEN

POINTS WITH PRIDE

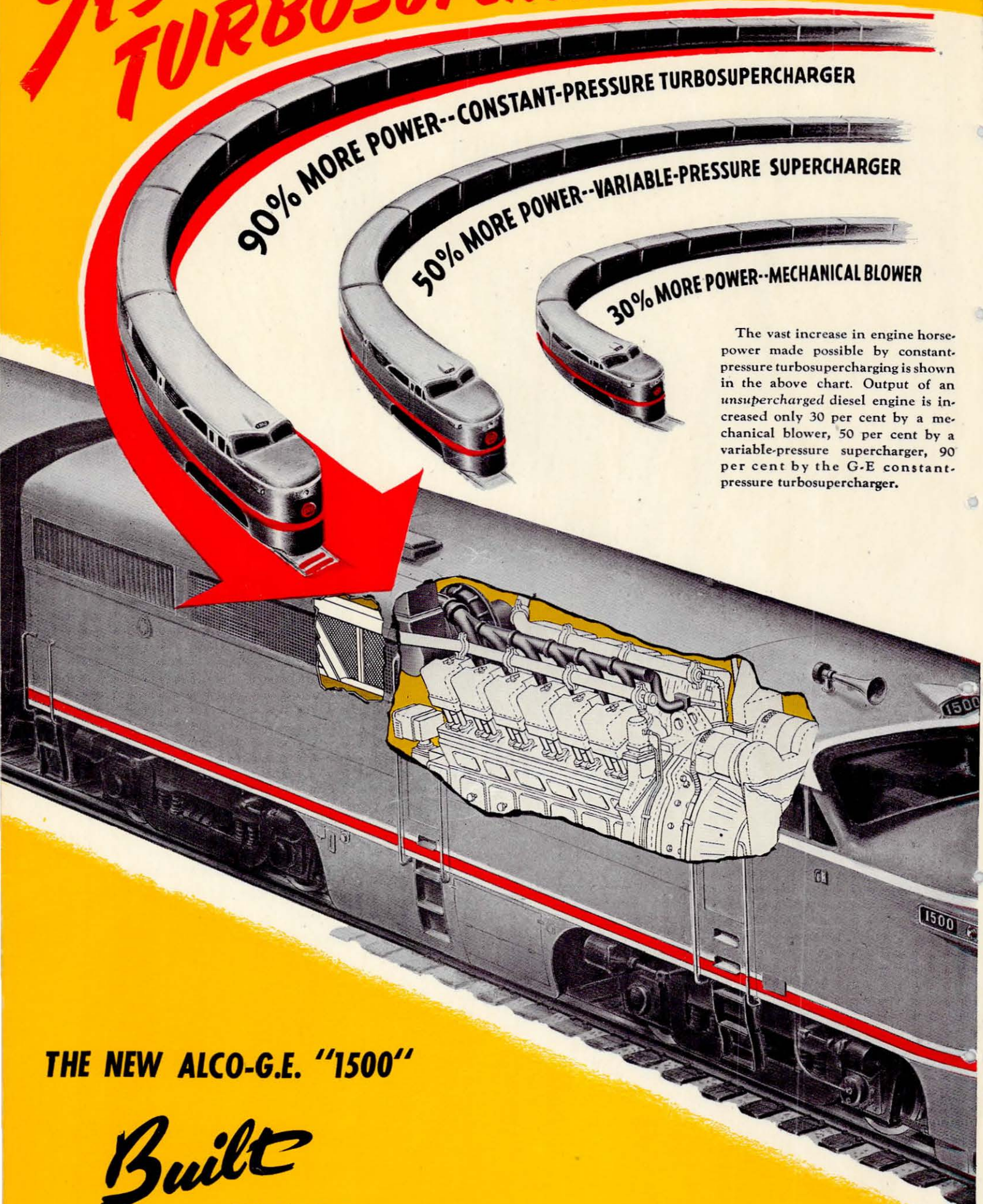


Any transportation operator can put his finger on the No. 1 seating advantage, it's—Comfort. Karpen transportation seating designers and engineers know your needs and how to fill them, with greater satisfaction to you and your passengers.

S. KARPEN & BROS.

OFFICES AND SHOWROOM 624 S. MICHIGAN AVE., CHICAGO • NEW YORK OFFICES, ONE PARK AVENUE

It's TURBOSUPERCHARGED!



The vast increase in engine horsepower made possible by constant-pressure turbosupercharging is shown in the above chart. Output of an *unsupercharged* diesel engine is increased only 30 per cent by a mechanical blower, 50 per cent by a variable-pressure supercharger, 90 per cent by the G-E constant-pressure turbosupercharger.

THE NEW ALCO-G.E. "1500"

Built

TO INCREASE RAILROAD EARNING POWER

MORE POWER TO RAISE THE CEILING ON PAY LOADS

This new Alco-G.E. diesel-electric road locomotive is equipped with an entirely new design of turbosupercharger which boosts engine horsepower approximately 90 per cent. This wealth of power means extra locomotive performance at lower cost—greater tractive effort, more tons of pay load, and faster schedules. All this and fewer power units, too, because each does more work and has higher availability.

This performance results largely from use of a new, constant-pressure system of turbosupercharging developed by General Electric for the Army Air Forces. Delivering air to the combustion chamber under pressure of 16 to 18 pounds per square inch, this system produces extremely high horsepower per cubic inch cylinder displacement, at unusually low fuel consumption rate. Specific output of the turbosupercharged engine is approximately two to four times that of other heavy-duty railroad diesels.

Compared with previously used supercharging systems, the constant-pressure turbosupercharger is simpler, lighter, and more efficient. It consists of but a single unit and operates from only one exhaust manifold connecting all cylinders. The unit itself weighs 1400 pounds—1100 pounds less than the two superchargers used in a conventional variable-pressure system.

And with the variable-pressure supercharger, output of the new diesel engine was raised from 800 horsepower to only 1200 horsepower—an increase of 50 per cent. With the constant-pressure turbosupercharger, output was boosted to 1500 horsepower, *plus*—an increase of 90 per cent.

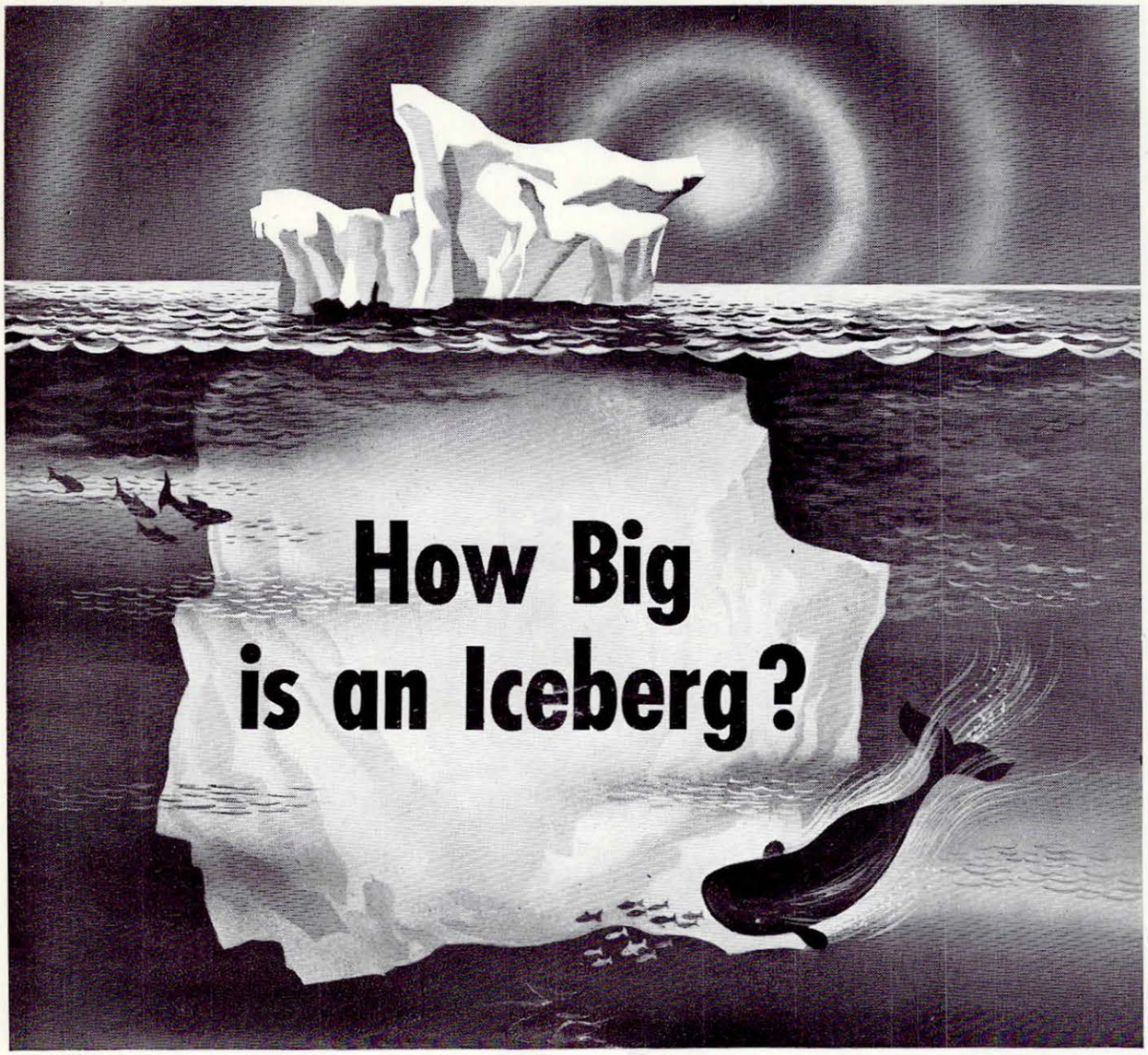
This mighty new turbosupercharger is only one of the many new features of the "1500." The new 12-cylinder diesel engine, the specially developed railroad-type generator and traction motors, the power plant load regulating system, the engine cooling system—all combine to make a locomotive which will haul more tons more miles in less time, at less cost. This locomotive is *really built to increase railroad earning power.*

Alco GE

AMERICAN LOCOMOTIVE AND GENERAL ELECTRIC

113-169-9580

WHAT EVERY BUSINESSMAN SHOULD KNOW ABOUT HIS PARTNER—THE RAILROADS



YOU DON'T SEE the whole iceberg when you see only what's above water. A mighty big part of it is hidden below the surface . . .

. . . and it's that way with some transportation costs.

It's impossible, for instance, to tell exactly how big real transportation costs are by air or water or intercity truck. A big part of the cost is hidden below the surface.

These hidden additions to your transportation bills are paid by you in the increased taxes made necessary when the private business of commercial transportation uses publicly constructed and maintained airways, waterways, and highways, *without paying adequate compensation.*

But there is no such uncertainty about final costs of rail transportation. The freight bill tells the whole story, for railroads pay all their own costs. They build and maintain the roadways on which they run—and they pay taxes which help to support all sorts of public services.

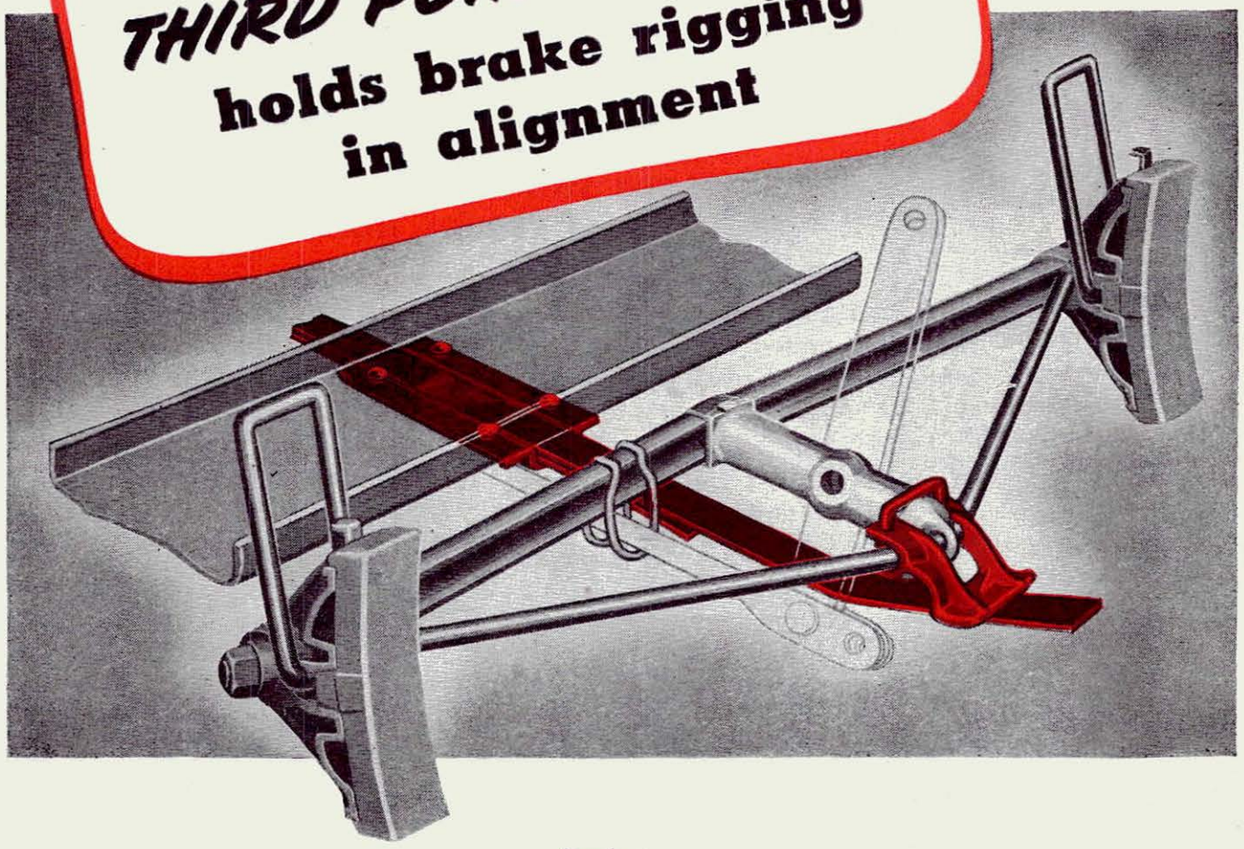
Hidden-cost transportation takes tax money out of the Federal and state treasuries and means higher taxes for everybody.

Rail transportation puts tax money *into* local, state and Federal treasuries, and means not only lower taxes but also the lowest real commercial transportation costs in the world.

ASSOCIATION OF **AMERICAN RAILROADS** WASHINGTON 6, D. C.

IN PARTNERSHIP WITH ALL AMERICA

CRECO
THIRD POINT SUPPORT
holds brake rigging in alignment



THE sliding chair of the Creco Third Point Support rides on a flexible arm . . . presenting a cushioned movement that holds the brake rigging in the proper alignment.

The resiliency of this Third Point Support absorbs brake rigging vibration, and reduces brake head and brake shoe wear.

Moreover, the Third Point Support is a safety device, for it prevents a brake beam from falling to the track. The brake beam can be easily removed when desired.

CRECO
Brake Beam
SUPPORTS

Creco Brake Beam Supports mean economy in brake rigging maintenance costs, and safety in operation

CHICAGO RAILWAY EQUIPMENT CO.

McCormick Building Chicago, Illinois

CHECK UP and Make Sure It's FABREEKA

TO ABSORB SHOCK, ISOLATE VIBRATION and REDUCE NOISE

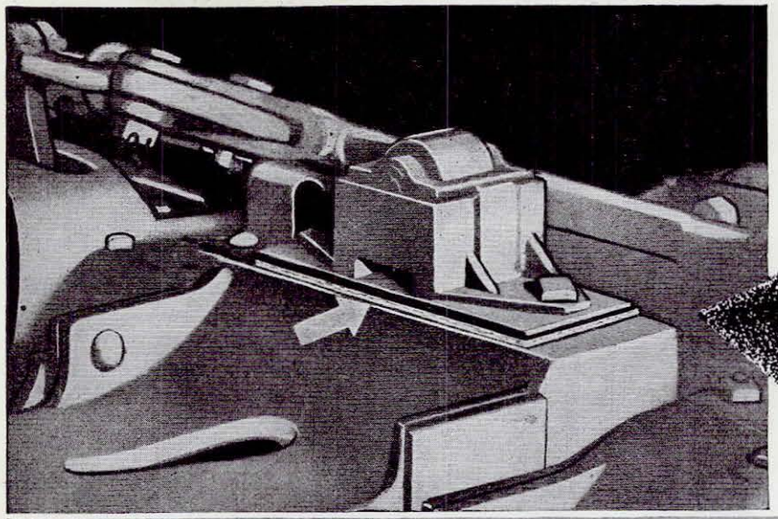
Because of its unique structure and design, only FABREEKA can give extremely long life and effectively absorb shock, isolate transmitted vibration and reduce noise. This fact has been proven by more than 12 years' use on the nation's railroads.

We call your attention to these eight important characteristics of FABREEKA: **Long Life . . . Great Strength . . . Minimum Permanent Set . . . Used "In Compression" . . . Limited Resiliency . . . Stability . . . Safety . . . High Damping.**

"Insist on Fabreeka"

Some Important Uses of FABREEKA On Passenger Cars:

1. At Coil Springs.
2. At Center Plates.
3. At Buffer Stems.
4. At Swing Hanger Bearings.
5. At Side Bearings.
6. At Journal Boxes.

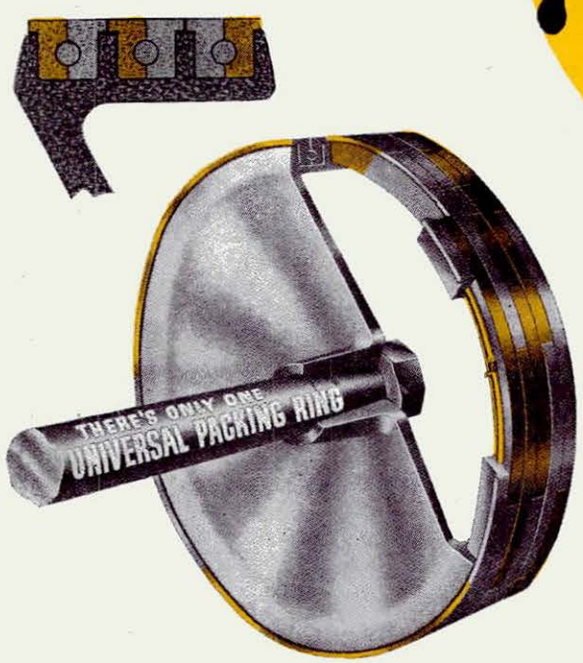


SIDE BEARING APPLICATION of FABREEKA

Used in **RAILWAY PASSENGER CARS, Trucks and Platforms . . . LOCOMOTIVES, Steam and Diesel Electric . . . TRACK CONSTRUCTION, on Bridges, Crossings, Curves, Turntables and Track Scales.**

FABREEKA PRODUCTS COMPANY, INCORPORATED
Boston 10, Mass.

FIRST in the field



OVER 25 years ago LFM engineers led the railroad field in developing and producing the Light Weight Alloy Steel Piston and Universal Sectional Bull and Packing Ring. Today, LFM is still first in supplying the railroads with this Light Weight Piston that provides greater locomotive economy and improved locomotive performance.

Being much lighter than conventional types, the application of LFM Pistons to your locomotives means—

- √ that less counter balance is required.
- √ that better counterbalance is possible with track structure impact greatly reduced.
- √ that less counterbalance and better counterbalance assures smoother running locomotives.
- √ that cylinder bushing maintenance expense is minimized.

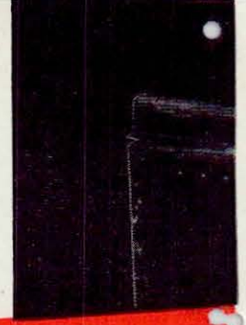
LIGHTWEIGHT ALLOY STEEL PISTONS
and Combination Universal Sectional
BULL and PACKING RINGS

Established 1872

THE LOCOMOTIVE FINISHED MATERIAL CO.

ATCHISON, KANSAS ★ NEW YORK CITY ★ CHICAGO, ILL.

14,760 U·S·S COR-TEN freight cars have been ordered in the past 18 months, because . . .



"COR-TEN Equipment" HAS COME TO MEAN

FOR several reasons, this list of new, rugged, lightweight U·S·S COR-TEN equipment that is going into service deserves more than a passing glance.

Of the 18 railroads placing these orders, all but one have used U·S·S COR-TEN construction previously—to save weight, to increase payload capacity and to prolong service life.

The Denver & Rio Grande Western, for example, with 2,552 U·S·S COR-TEN built cars already in service, started using U·S·S COR-TEN construction in 1939. The Union Pacific bought their first COR-TEN freight cars (2,750) in 1937. In the next four years they bought 5,430 more. The Delaware & Hudson built an experimental hopper car of U·S·S COR-TEN in 1936 . . . 100 more in 1941, 200 in 1945.

Eleven years ago the Chicago, Burlington & Quincy bought 5 U·S·S COR-TEN hoppers. Today they have 8,900 COR-TEN cars in service—more are on order.

The Pennsylvania, the Southern Pacific, The Great Northern, The Milwaukee Road, The St. Louis Southwestern, and the Chicago, Rock Island & Pacific have all used U·S·S COR-TEN since 1937.

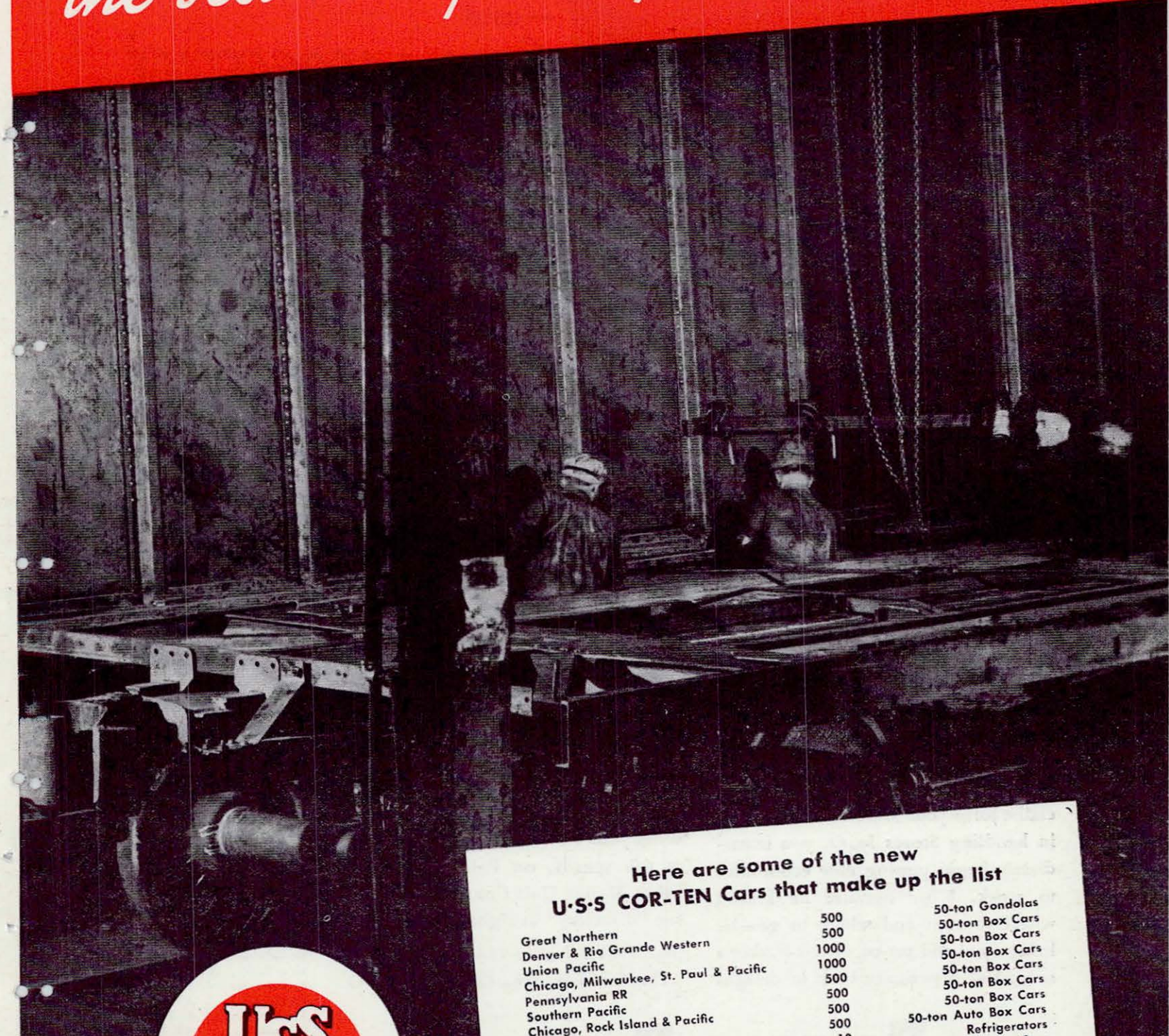
Why do leading railroads, year after year, keep adding more and more U·S·S COR-TEN cars? Why are there more than 67,000 of these cars in service, now building or on order? The reasons are clear. *U·S·S COR-TEN equipment has performed as anticipated.* It has carried more payload. It has cost less to operate. It has stood up in high-speed, heavily loaded service with absolute safety. And it has done this on all types of equipment, both freight and passenger, operating in every kind of service, under all sorts of conditions. No lightweight metal or other high-strength, low-alloy steel can even approach U·S·S COR-TEN's record in this respect.

AMERICAN STEEL & WIRE COMPANY, *Cleveland, Chicago and New York*
CARNEGIE-ILLINOIS STEEL CORPORATION, *Pittsburgh and Chicago*
COLUMBIA STEEL COMPANY, *San Francisco*
NATIONAL TUBE COMPANY, *Pittsburgh*
TENNESSEE COAL, IRON & RAILROAD COMPANY, *Birmingham*
United States Steel Supply Company, Chicago, *Warehouse Distributors*
United States Steel Export Company, New York

LISTEN TO . . . the "Hour of Mystery" presented by United States Steel on the radio every Sunday evening. Consult your local newspaper for time and station.

UNITED STATES STEEL

"the best in lightweight construction"



Here are some of the new U·S·S COR-TEN Cars that make up the list

Great Northern	500	50-ton Gondolas
Denver & Rio Grande Western	500	50-ton Box Cars
Union Pacific	1000	50-ton Box Cars
Chicago, Milwaukee, St. Paul & Pacific	1000	50-ton Box Cars
Pennsylvania RR	500	50-ton Box Cars
Southern Pacific	500	50-ton Box Cars
Chicago, Rock Island & Pacific	500	50-ton Auto Box Cars
Union Pacific	500	Refrigerators
General American Trans. Corp.	10	50-ton Box Cars
St. Louis Southwestern	150	50-ton Auto Box Cars
St. Louis Southwestern	100	70-ton Flat Cars
St. Louis Southwestern	50	50-ton Box Cars
Southern Pacific	1600	40-ton Hopper Cars
Delaware & Hudson	200	70-ton Hopper Cars
Bessemer & Lake Erie	750	50-ton Gondolas
Elgin, Joilet & Eastern	300	70-ton Covered Hoppers
Elgin, Joilet & Eastern	75	

USS HIGH STRENGTH STEEL

UNITED STATES STEEL

Good Stores-keeping Begins with good Trucking

—and

***Industrial* LOGISTICS★**

puts correct-type Elwell-Parkers to work transporting <u>your</u> Stores loads with new economies

★ The science of assembling and handling Railway Loads to insure maximum economies at every stage from receipt to delivery, using Elwell-Parker Electric Trucks, Tractors and Cranes;

Employing the correct containers (Boxes, Barrels, Bags or Bales) in Master Unit Loads, on Pallets or Skids;

To insure Volume Loading—Quicker Dispatch — Greater Speed — Reduced Damage — Fewer Delays —Increased Safety and Lower Costs.

Dial The EP Railway Specialist Today!

With Elwell-Parker, "good Trucking" means mass movement of hundreds or thousands of separate Stores items *on schedule*—with safety to employes and new savings that assure further reductions in operating costs.

When the Elwell-Parker Railway Specialist joins your search for short cuts in handling Stores loads, you immediately begin putting new economies to work. *Why?* Because he knows where to start and where to go—he brings you the *net* of Elwell-Parker's successful experience both in designing and building thousands of Trucks for the Railways.

Your nearby Elwell-Parker Railway Specialist will recommend Trucks of correct models and sizes—with soundly-engineered Attachments for handling your Stores loads in full volume, at top speeds, on Pallets, Skids or other Master Unit Containers. Please see "directory" at right.

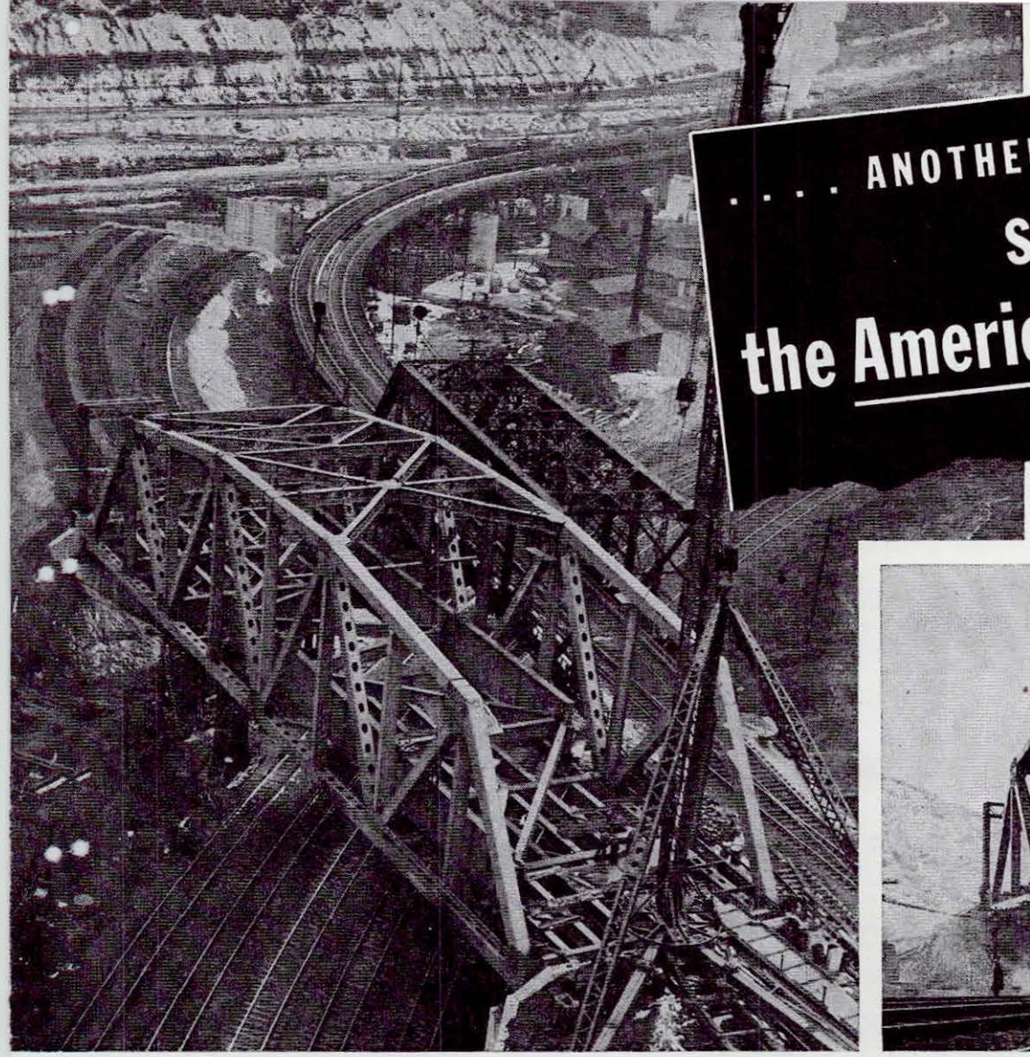
The Elwell-Parker Electric Company, 4250 St. Clair Ave., Cleveland 14, O.

Birmingham	3-3323
Boston	COM 5522
Buffalo	GR 7664
Charlotte	5026
Chicago	SUP 7420
Cincinnati	MA 0650
Cleveland	MA 8915
Columbus	AD 4824
Denver	KE 5500
Detroit	MA 2233
Ft. Worth	4-6184
Greenville	534
Indianapolis	LI 3131
Jacksonville	5-1384
Kansas City	VA 7021
Los Angeles	PR 5911
Memphis	8-1648
Miami	48-5387
Milwaukee	MA 7817
Minneapolis	GE 3247
Montreal	HA 7191
New Orleans	MA 6316-C
New York	COR 7-0797
Philadelphia	RIT 7246
Pittsburgh	AT 6734
Richmond	RI 27977
St. Louis	LA 4545
San Antonio	TR 3653
San Francisco	GA 1827
Seattle	EL 5722
Stratford	BR 7-1554
Syracuse	2-9596
Toronto	WA 1478
York	YO 4-5430

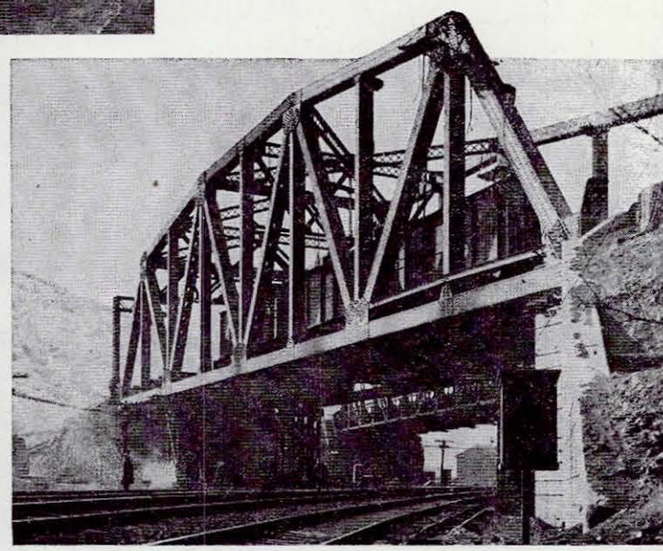
ELWELL-PARKER

POWER INDUSTRIAL TRUCKS

Established 1893



. . . . ANOTHER BRIDGE PROBLEM solved the American Bridge Way!



HERE'S THE Union Railroad's new 204-ft. three-track, through truss span, crossing the main line of the Pennsylvania Railroad near East Pittsburgh, Pa. It replaces the old two-track structure to the right. The problem was to construct this efficiently and economically—*and without disrupting the continuously heavy traffic of either railroad.*

THE FIVE PRR TRACKS were temporarily spanned by 122-ft. plate girders supported on four falsework bents. The truss span floor beams were suspended from the girders during erection, thus eliminating intermediate falsework and maintaining the necessary overhead clearance. The girders will again be used as falsework for dismantling the old truss span and will then go into a permanent plate girder viaduct farther up the line—the temporary girder bracing will become permanent truss stringers.

THE TRUSSES of the new bridge are 48-ft. center to center—total weight of the span is 1,086 tons. Note the giant American Bridge stiff-leg derrick. Its 150-ton capacity is invaluable on a job of this type, making it possible to erect most of the span from one position, "on shore".

All the steel work for this relocation project was designed, fabricated and erected by American Bridge Company. Whatever your own bridge problems, you are invited to call upon the unsurpassed facilities and engineering experience of American Bridge

AMERICAN BRIDGE COMPANY

General Offices: Frick Building, Pittsburgh, Pa.

District Offices in: Baltimore · Boston · Chicago · Cincinnati · Cleveland Denver · Detroit · Duluth · Minneapolis · New York · Philadelphia · St. Louis

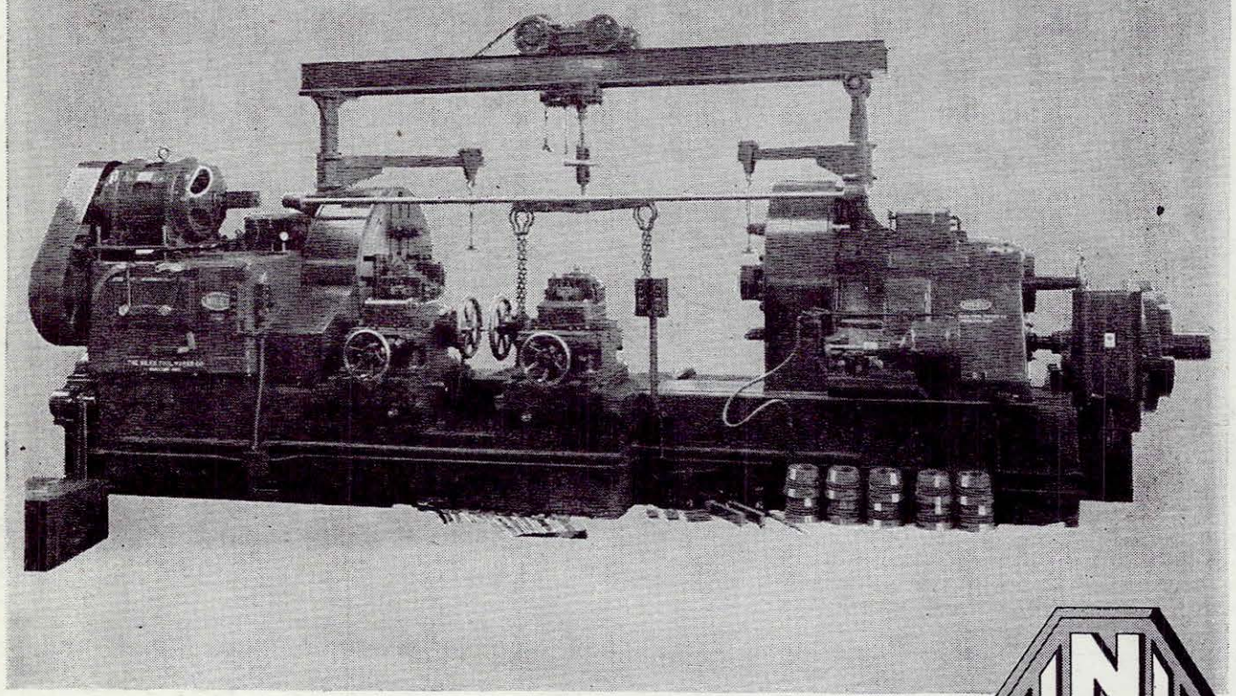
Columbia Steel Company, San Francisco, *Pacific Coast Distributors*
United States Steel Export Company, New York

AMERICAN BRIDGE COMPANY · USS STEEL · UNITED STATES STEEL

UNITED STATES STEEL

NILES *Car Wheel Lathe*

BUILT FOR HIGHEST POSSIBLE OUTPUT



FEATURES

1. Hardened and ground wear plates under turrets and turret slides.
2. Crossfeed screw oiled from pocket in slide completely covered.
3. Hardened and ground wear plates on bed for sliding headstock.
4. Gears fully enclosed and automatically lubricated.
5. Machine arranged to handle wheel sets equipped with anti-friction bearings.
6. Steel face plate gears.
7. Anti-friction spindle thrust bearings.
8. Alloy bronze spindle main bearings.
9. Right hand headstock clamp pneumatically operated.
10. Sloping bed to facilitate removal of chips.
11. Capacity: wheels from 26″ to 52″ tread diameter.

NILES

This lathe has the same important features that have made the Niles 90″ heavy driving wheel lathe leader in the locomotive shops.

GENERAL MACHINERY CORPORATION

GENERAL MACHINERY CORPORATION

HAMILTON, OHIO

REPRESENTED THROUGHOUT LATIN AMERICA BY MACHINE AFFILIATES, INC.

THE NILES TOOL WORKS CO. ★ THE HOOVEN, OWENS, RENTSCHLER CO.

Here Is Our Proposal:

MAKE A TON OF SHEET STEEL GO FARTHER—PRODUCE MORE GOODS

The Trend of American Industry Suggests the Method

This is not a radical idea. It is in keeping with an established trend in industry to adapt better metals to the job, and make them "pay their own way" through more efficient design and production. Sometimes the goal has been to improve product performance, eliminate excess weight, or simplify fabricating operations. Today, the primary goal of practically all metal-working industries is to *get more production—make a ton of steel produce more goods.*

High-Tensile Steels Provide the Way

High-tensile, low-alloy steels have the properties needed to attain this objective. By taking advantage of their higher yield and tensile strengths and great corrosion-resistance, designers can reduce sections as much as 25% in a wide range of applications now built of carbon sheet steel—and still retain the same strength and durability. Metallurgy takes the place of mass to boost production per ton of steel.

Our Estimate: One Extra Product for Every Three You Build

We have worked closely with manufacturers on the application of N-A-X HIGH-TENSILE steel for varied parts and products. We know what can be accomplished with this fine-grained, low-alloy steel. It is our estimate that production of units per ton can be increased as much as 33% by replacing heavier sections of carbon sheet steel with lighter sections of N-A-X HIGH-TENSILE. And because of the good formability of N-A-X HIGH-TENSILE, exceptional in such a high-strength steel, the change-over can be accomplished without serious problems in fabricating.

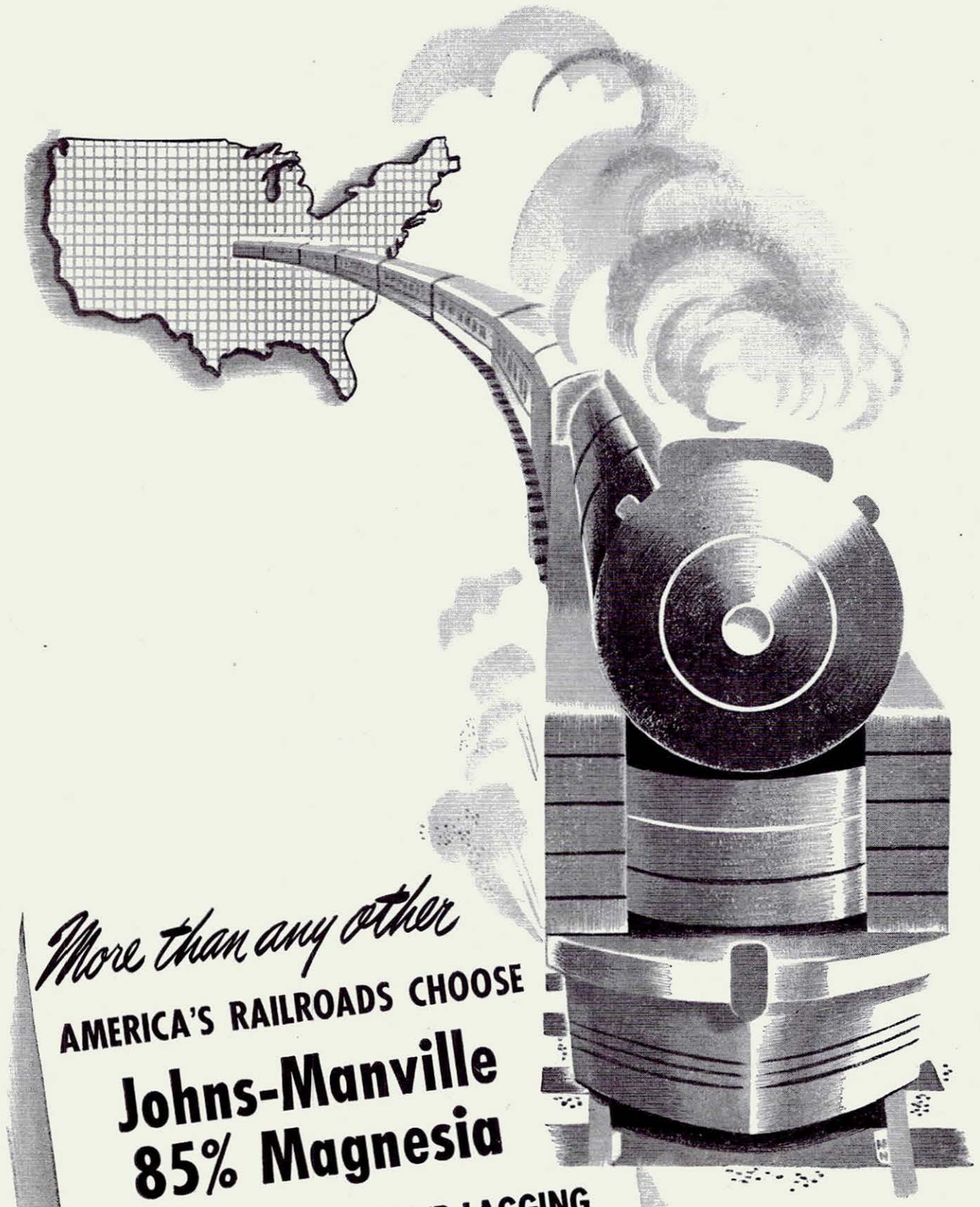
Our Challenge: Look at Over-All Costs

We also believe that the higher cost of N-A-X HIGH-TENSILE, compared to carbon sheets can be compensated by production economies, over and above the savings in steel effected by its high strength. Greater corrosion-resistance, freedom from age-hardening and embrittlement, and increased resistance to "set" when bent may reduce handling costs. Exceptional formability and other desirable characteristics of N-A-X HIGH-TENSILE make possible the elimination of intermediate annealing between draws in many cases. Also, finer grain structure and higher hardness produce a smoother surface texture when drawn or stretched, resulting in a saving of metal finishing or in a higher degree of finish when painted or plated. These and other manufacturing advantages of N-A-X HIGH-TENSILE can be utilized to make N-A-X HIGH-TENSILE "pay its own way" on the basis of *over-all costs.*

We would like to work with you on your problems. We believe N-A-X HIGH-TENSILE will produce one extra product for every three you build.

GREAT LAKES STEEL
Corporation
N-A-X ALLOY DIVISION • DETROIT 18, MICHIGAN
UNIT OF NATIONAL STEEL CORPORATION

COPYRIGHT 1946, GREAT LAKES STEEL CORPORATION



More than any other

AMERICA'S RAILROADS CHOOSE

Johns-Manville 85% Magnesia

FOR LOCOMOTIVE BOILER LAGGING

JOHNS-MANVILLE • 88 YEARS OF SERVICE TO TRANSPORTATION

New York, Chicago, Cleveland, St. Louis, San Francisco

They link narrow gauge to standard...on the

EAST BROAD TOP RAILROAD

The East Broad Top Railroad and Coal Company showed a lot of ingenuity in solving the problem imposed by their narrow-gauge trackage. They were able, through truck changing, to haul standard gauge cars. But the coupler centers of narrow and standard gauge cars were out of line. So trick number one was the design of a coupler adapter to link them.

The first one had plenty of strength. But it took a pair of huskies to lift the 250-pound heavy metal casting into position. Coupling up the cars was a chore, with the ever-present danger of injury to the switchmen . . .

In 1934, they asked Alcoa to furnish an aluminum coupler adapter. We supplied a sample casting of Alcoa 220-T4 alloy early in 1935. Trick number two—substituting a light, strong Alcoa Aluminum casting for the ponderous one, worked so well that five additional aluminum adapters were ordered.

Even in its thicker cross section, necessary to handle the stresses involved, the Alcoa Aluminum adapter weighed only 100 pounds. With the awkwardness and danger of heavy weight eliminated, only remaining improvement was economy. So, in 1936 came trick number 3, a sample casting of lower-cost 195-T4 alloy. Three additional were ordered. We asked them recently for the 10-year performance record . . .

THE EAST BROAD TOP RAILROAD & COAL COMPANY

December 18, 1945.

Aluminum Company of America,
Attention: Mr. A. E. Woolley, Chief Engineer,
Railroad Division,
New Kensington, Pennsylvania.

Dear Mr. Woolley:

I am very pleased to inform you that the aluminum coupler adapters made by your company for our use quite some time ago, have never failed us and have been very satisfactory in handling of standard gauge cars over this railroad.

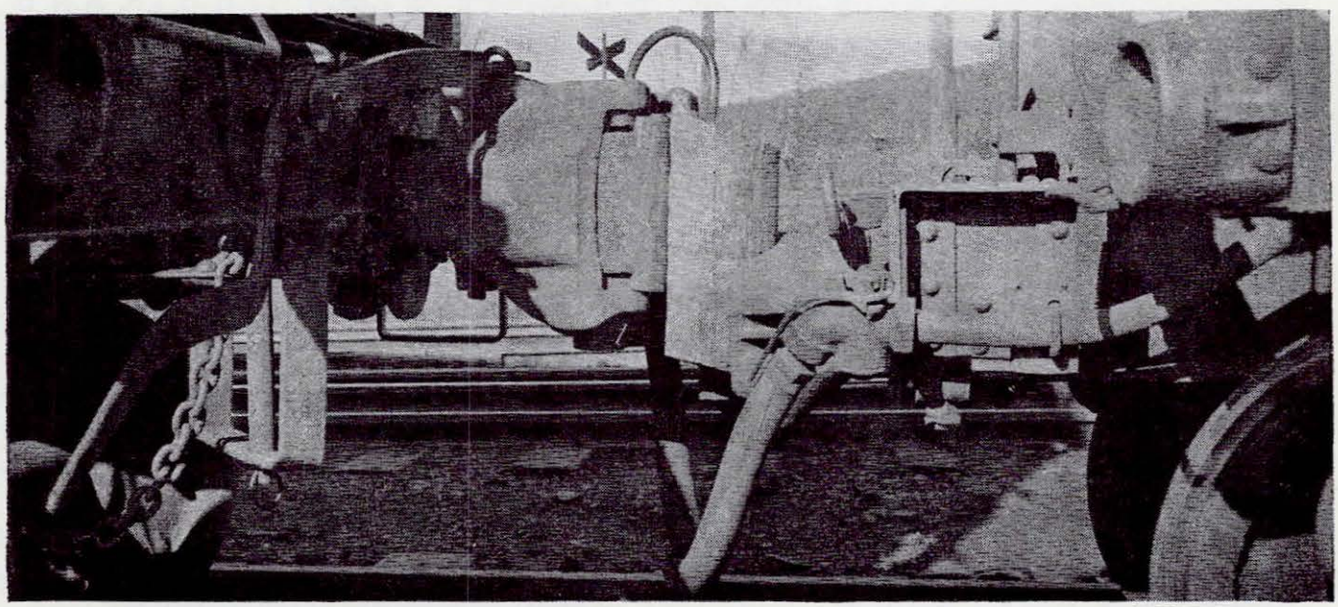
With kind regards,

Yours very truly,

Jones
Operating Vice-President.

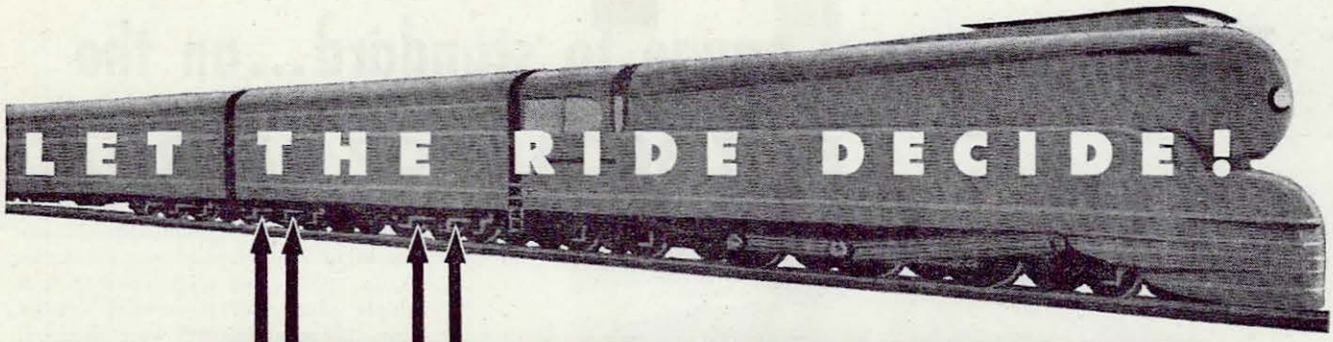
Proof again that Alcoa Aluminum and railroading *go together*—not just for surface beauty, or for corrosion resistance, but for the heavy-impact, pull-on-the-drawbar, *tough* jobs as well.

ALUMINUM COMPANY OF AMERICA, 2178 Gulf Building, Pittsburgh 19, Pa. Sales offices in principal cities.



ALCOA FIRST IN ALUMINUM

IN EVERY COMMERCIAL FORM



LET THE RIDE DECIDE!

ENGINE TENDER TEST REVEALS "BEFORE AND AFTER" RIDING QUALITIES

To find out what the new style C-200 *Ride-Ease* Spring Nests will do for your Freight Cars and Tenders, install them under one of your tenders in high speed service. We'll furnish instruments to make recordings (in co-operation with your engineers) of riding qualities "Before and After."

The Holland *Ride-Ease* Volute Truck Springs, Style C-200, take the place of all the conventional helical springs; they represent the first revolutionary change in truck springs in many generations—*a major improvement—a complete unit for existing equipment—a long-travel, self-damping, suspension Truck Spring.* If interested, write for information.

50-Ton Group for Cars and Tenders

New Style
HOLLAND VOLUTE
Truck Spring C-200

2¾" Travel

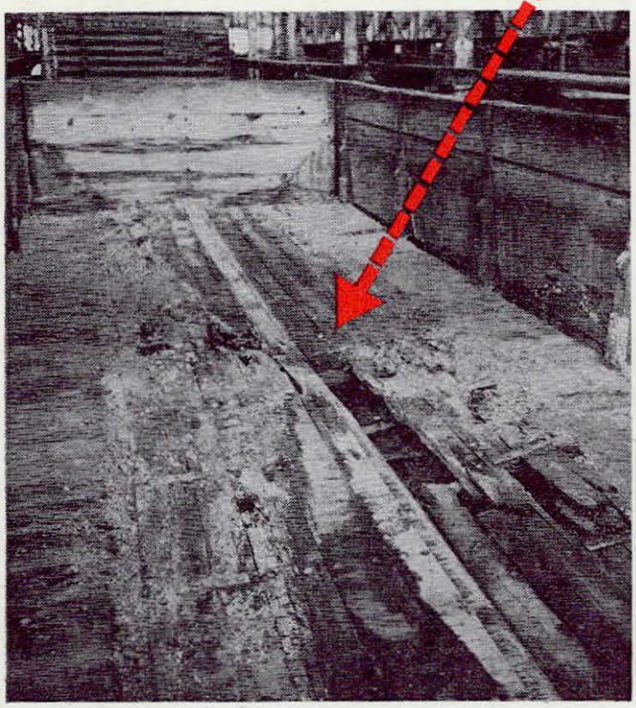
Twice as Soft as the A. A. R. 1915 Spring

HOLLAND COMPANY
332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS

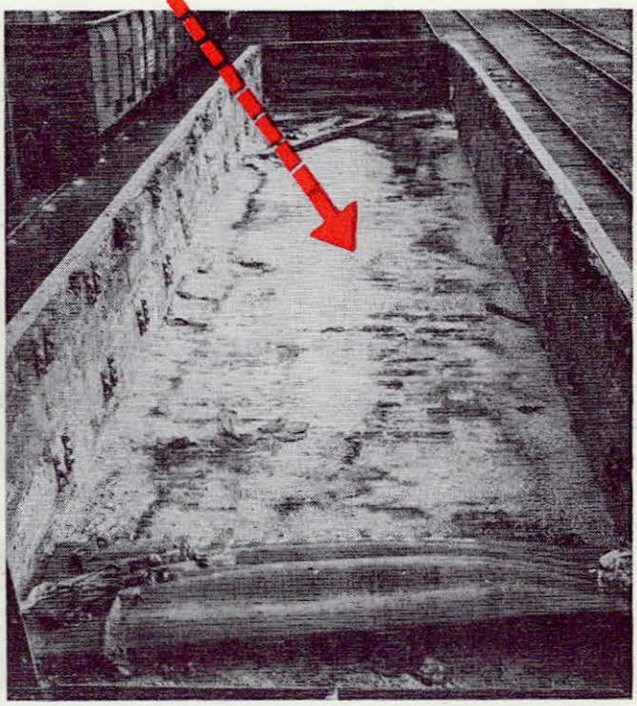
1891

Which will you have?

THIS .. OR THIS



CAR WITH UNTREATED DECKING IN FOR REPAIRS AFTER **5** YEARS



CAR WITH PRESSURE-TREATED SIDING AND DECKING IN FOR REPAIRS AFTER **14** YEARS

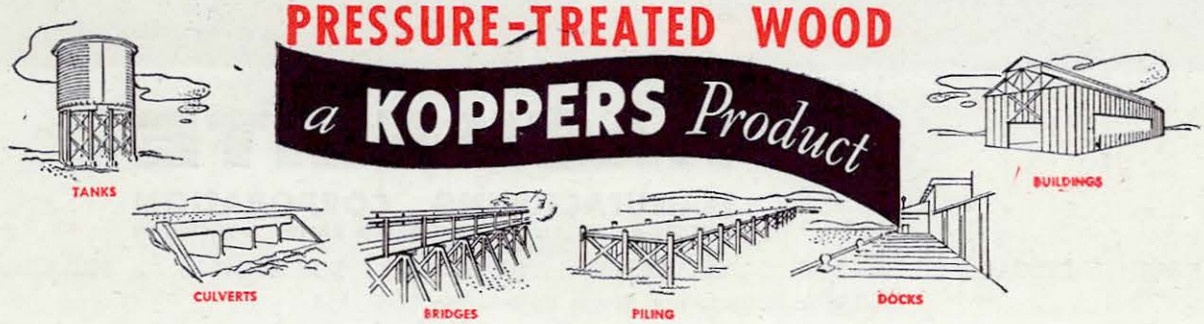
A lot of railroad men today are asking themselves whether they can *afford* to continue the use of untreated decks. The pictures shown above tell why.

The car at left, with untreated decking, is in bad condition after only 5 years' service. The car at right, with pressure-treated decking, is in better condition after *14 years'* service. The treated siding has been damaged, but there is remarkably little breakage and no decay.

Based on typical costs as reported by a user, the yearly charge for the treated deck was less than half that of the untreated deck. Or, to figure it another way, the treated deck paid for itself in less than two years of additional service . . . and for the next seven years the installation returned a "profit" of over $20.00 annually.

We advocate the treatment of car lumber, and will be glad to quote on your requirements.

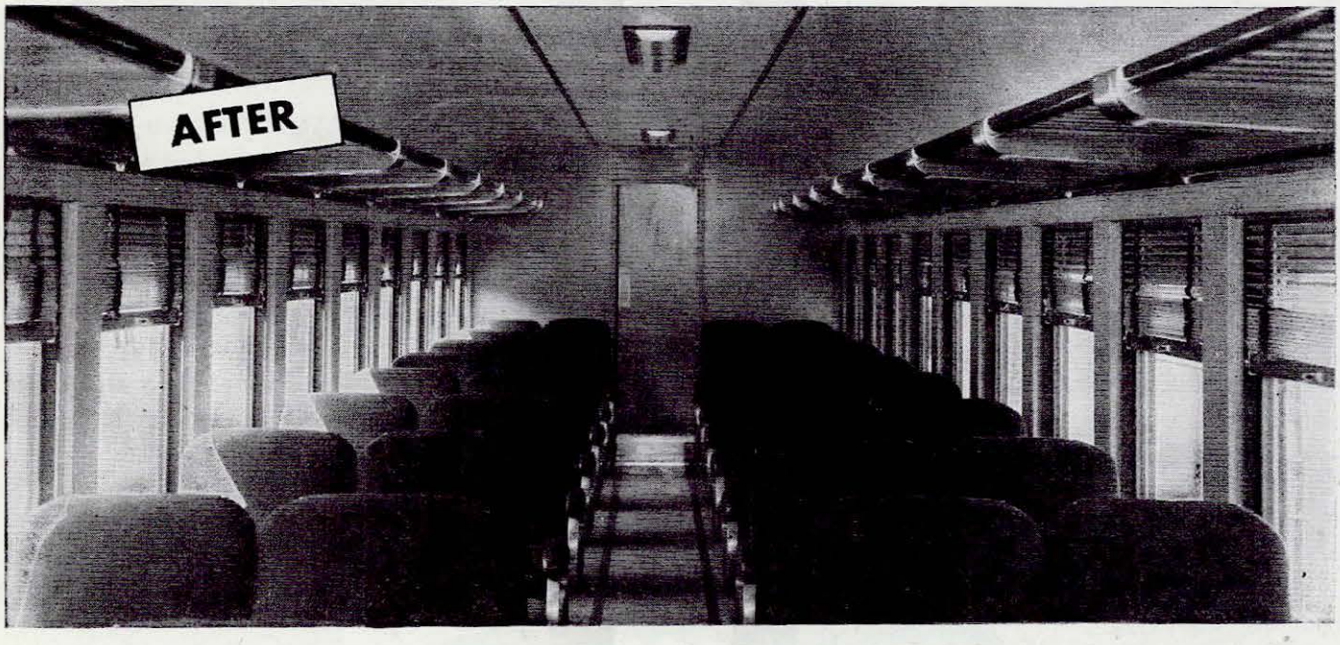
Wood Preserving Division, Koppers Company, Inc., Pittsburgh 19, Pennsylvania.



Plymetl

. . . REVOLUTIONIZES RENOVATING

Here is how Gulf, Mobile and Ohio gives old coaches new passenger appeal . . . by renovating with Haskelite PLYMETL. For unique PLYMETL drastically cuts dead weight . . . deadens sound and vibration . . . beautifies . . . and reduces fabricating time. The remarkable improvement shown by the photographs below illustrates how car builders use light-weight PLYMETL for bulkheads, interior partitions and transoms (type UVU) and for doors (type EVE). For rebuilding the old or building the new, specify Haskelite PLYMETL. Send TODAY for complete new bulletin on this challenging material of opportunities.



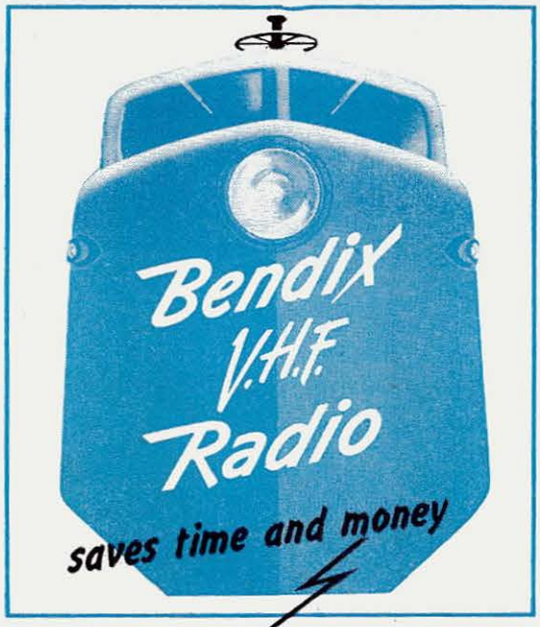
HASKELITE

MANUFACTURING CORPORATION

DEPT. RR-8 GRAND RAPIDS 2, MICHIGAN

NEW YORK CHICAGO DETROIT CLEVELAND ST. LOUIS LOS ANGELES PHILADELPHIA

CANADA: Railway and Power Engineering Corp., Ltd.

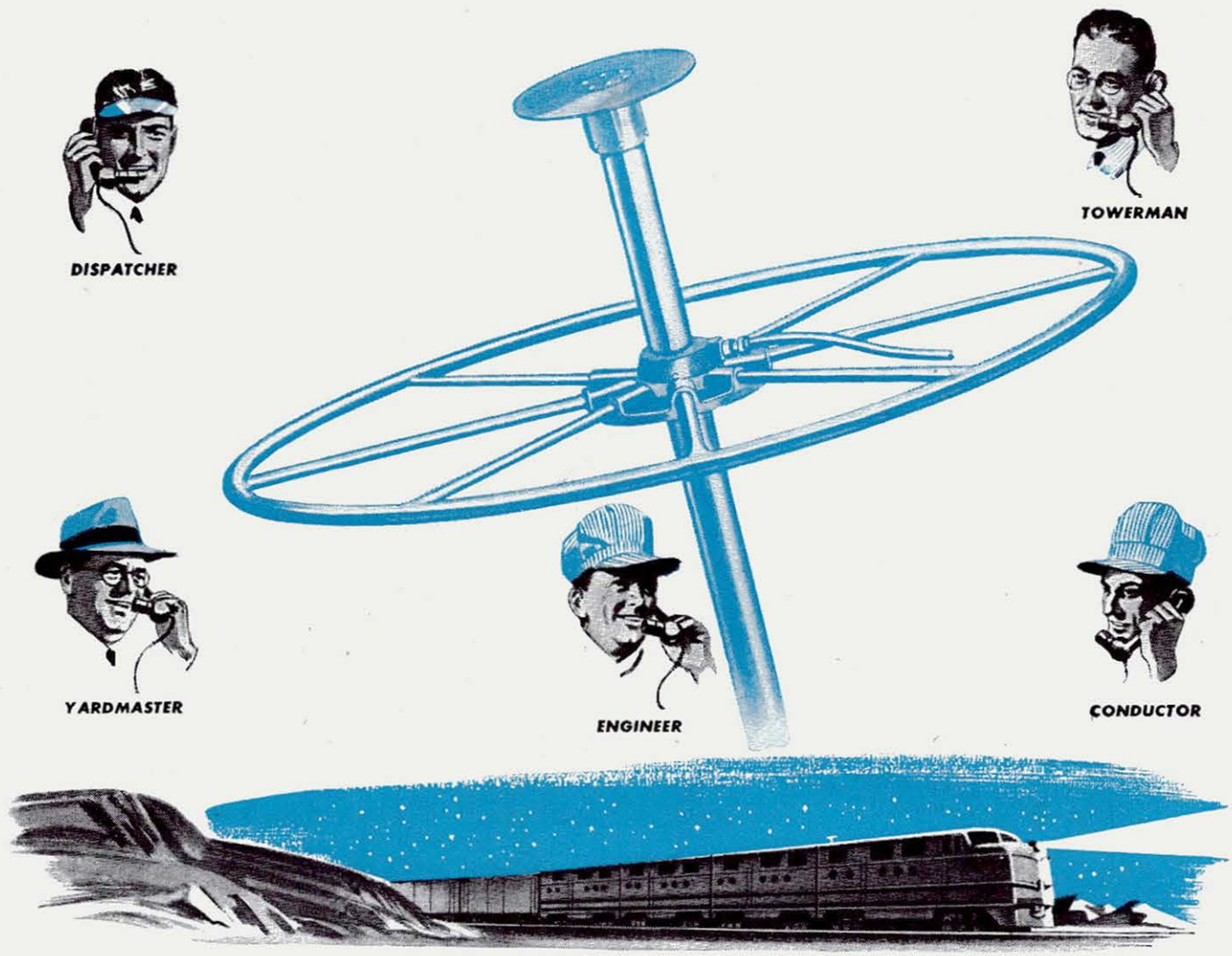


The two-way voice communication system provided by Bendix V.H.F. Radio brings the dispatcher, yardmaster, wayside operator and towerman within speaking range of the operating crew—links in instant contact all those whose job it is to speed railroading.

In end-to-end operation, this direct conductor-to-engineer speaking contact means faster clearance of yard passages, "slow-order" tracks and sidings, minimizes the danger of costly break-in-twos, means instant action on any emergency developments.

Ask our engineers to prove how Bendix V.H.F. Radio can speed operations—save your railroad time and money.

instant contact means faster runs!

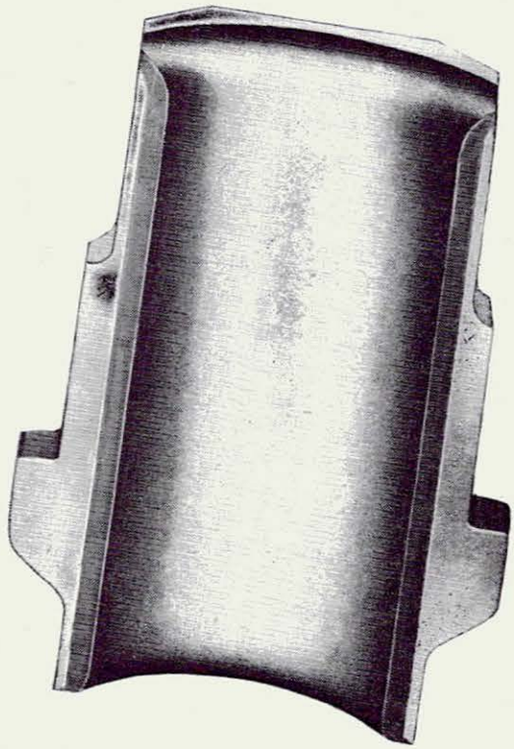


BENDIX RADIO
REG U S PAT OFF

BENDIX RADIO DIVISION
Bendix Aviation Corporation
BALTIMORE 4, MARYLAND

PRODUCT OF Bendix AVIATION CORPORATION

Improved



Engine-Truck, Trailer, Tender and Passenger-Car Journal Bearings

Satin finish BROACHING

MAGNUS BEARING IMPROVEMENTS

1. Improved Bearing Metal Composition
2. **Improved Satin Finish Broaching**
3. Improved Denser Lining Metal
4. Improved Finer Finishing Equipment
5. Automatic Heat Control for Metal Melting Kettles

• A new type of machine has been developed and is now being used for broaching Magnus bearing linings, including fillets, to a better, satin-smooth finish.

SATCO Bearing Metal

MODERN HEAVY DUTY BEARINGS

MAGNUS METAL CORPORATION
CHICAGO NEW YORK

Nobody knows if it's possible to wear out seating

covered with Firestone Velon*

Frankly, we don't know because through years of abuse as upholstery fabric on overloaded wartime transportation, *Velon* has yet to show any signs of wear!

***Velon* defies abrasion**—never snags, because each thread is a single fibre of giant strength.

***Velon* wipes clean with a damp cloth.** Grease and grime can't cling to its non-porous threads.

***Velon* makes smarter colors practical.** In delicate pastels or vigorous tones, in any pattern or weave, *Velon* stays new-looking, can't fade or change color.

cushioned with Firestone FOAMEX*

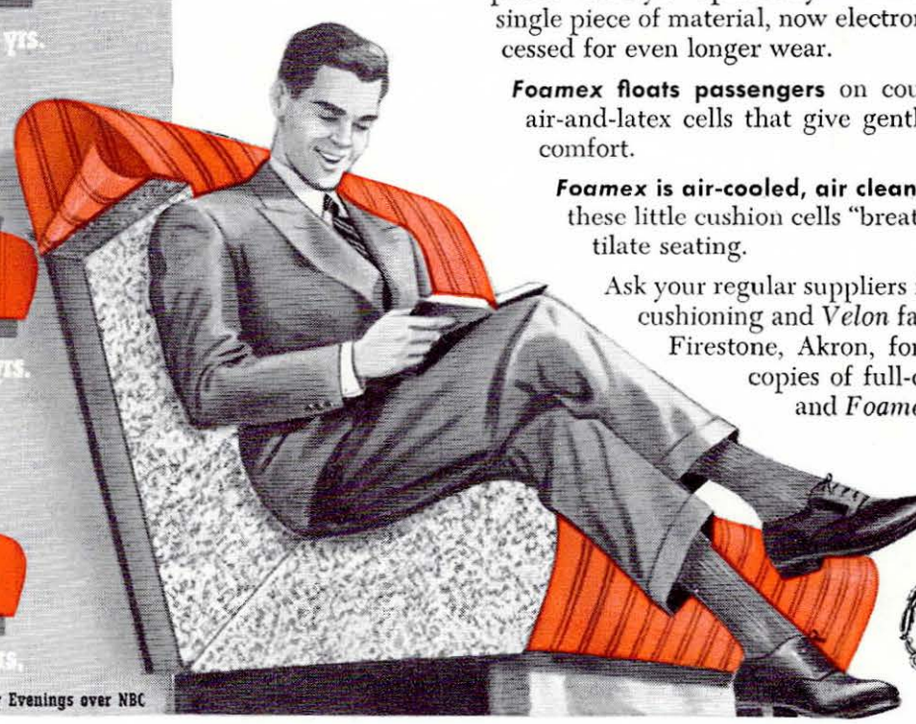
***Foamex* cushioning** installed before the war has, in many instances, outlasted the life of the vehicle itself!

***Foamex* is lump-proof, sag-proof** because it replaces old-style upholstery "innards" with a single piece of material, now electronically processed for even longer wear.

***Foamex* floats passengers** on countless tiny air-and-latex cells that give gentle, cradling comfort.

***Foamex* is air-cooled, air cleaned** because these little cushion cells "breathe" to ventilate seating.

Ask your regular suppliers for *Foamex* cushioning and *Velon* fabric. Write Firestone, Akron, for your free copies of full-color *Velon* and *Foamex* booklets.



BEST TODAY··· STILL BETTER TOMORROW

Listen to the Voice of Firestone Monday Evenings over NBC

*TRADE MARK

paint -GOES ON FASTER -BONDS TIGHTER -LASTS LONGER

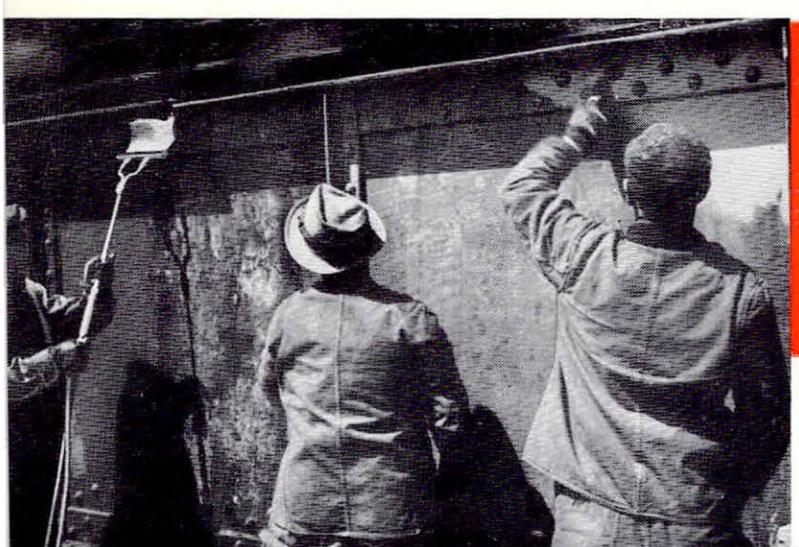
WHEN SURFACES ARE CLEANED **FIRST** BY

OXY-ACETYLENE FLAMES

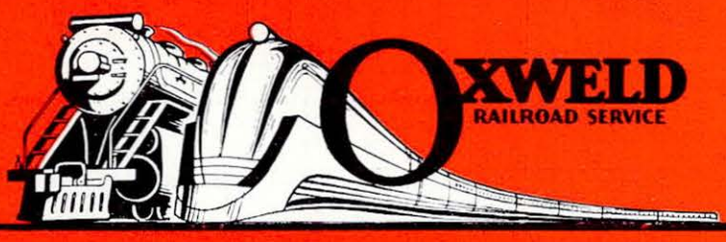
THREE STEPS FOR BEST RESULTS:

1. Flame-Cleaning — loosens scale, drives out moisture.
2. Wire-Brushing — removes loose material.
3. Painting — spreads easily on the warm, dry surface.

Ask an Oxweld representative for complete information.



THE OXWELD RAILROAD SERVICE COMPANY
Unit of Union Carbide and Carbon Corporation
UCC
Carbide and Carbon Building Chicago and New York



OXWELD
RAILROAD SERVICE

SINCE 1912—THE COMPLETE OXY-ACETYLENE SERVICE FOR AMERICAN RAILROADS

More Loads . . BIGGER L.C.L. Loads . . MOVED FOR LESS!

Every cost-conscious railroad wants to achieve greater L.C.L. freight handling economy. And that is exactly what Yale Material Handling Machinery is built to do. Take the above situation as an example. L.C.L. shipments, transferred to the four-wheel live skid trailer, are picked up right in the freight car by the Yale Low-Lift Platform Truck. Then the truck operator moves the large load into temporary storage at a fast clip and hurries back for another! Such efficient, effort-saving handling of L.C.L. freight steps up distribution speed—cuts the cost per ton.

The complete line of Yale Material Handling Machinery is broad and provides great flexibility in application. To learn more about its practical money-saving functions, write the nearest representative for a copy of our book, "Ways to Cut L.C.L. Freight Handling Costs." Or, send your request direct to headquarters.

The Yale & Towne Manufacturing Company, 4530 Tacony Street, Philadelphia 24, Pa.

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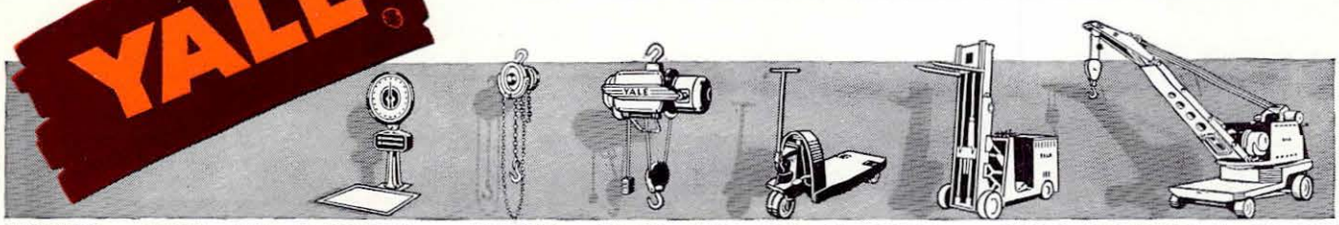
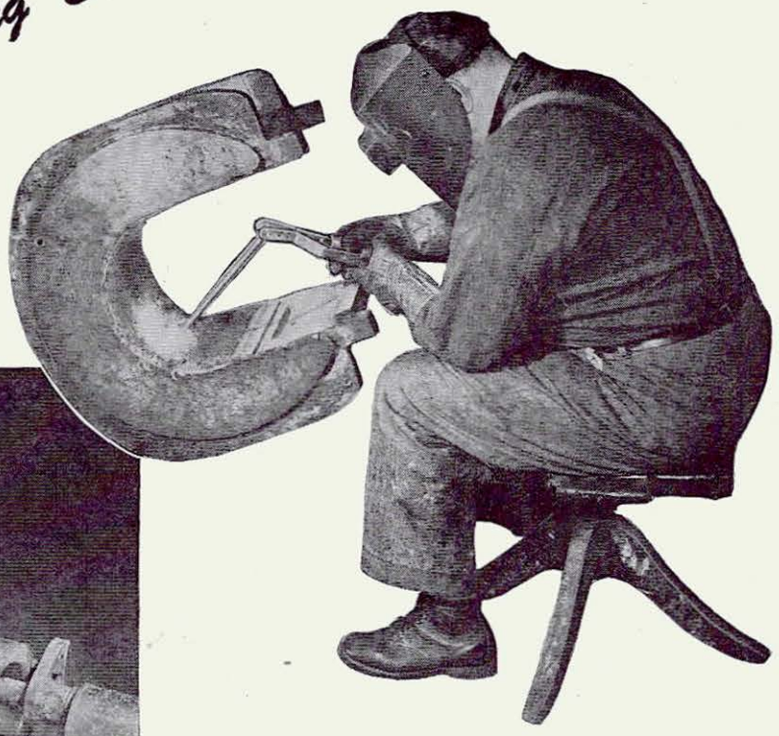
MATERIAL HANDLING MACHINERY

CUTS HANDLING COSTS . . . SAVES TIME . . . SAVES EFFORT . . . PROMOTES SAFETY

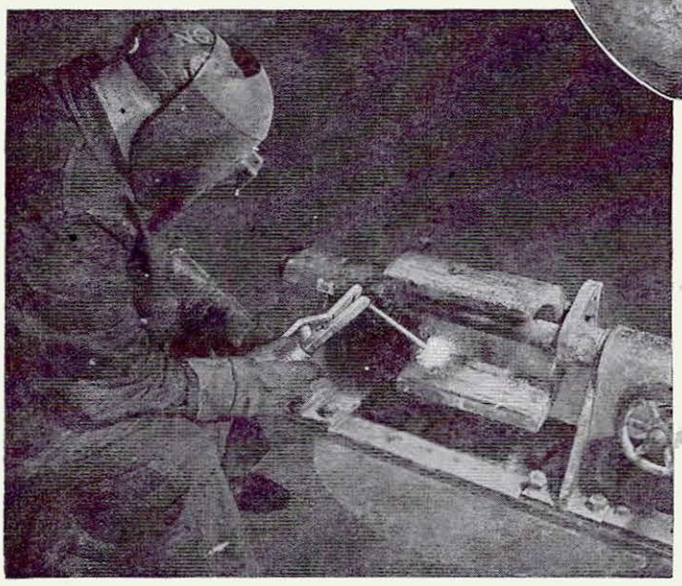


HOISTS — HAND AND ELECTRIC • TRUCKS — HAND LIFT AND ELECTRIC • KRON INDUSTRIAL SCALES

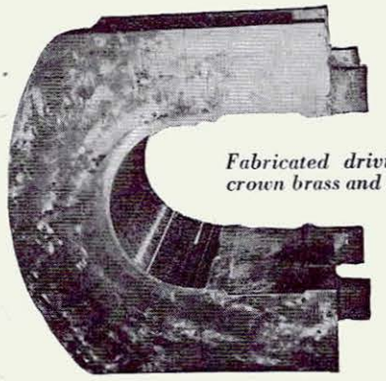
HOW TO CUT *Driving Box* MAINTENANCE COSTS



Building up the crown brass with Airco No. 19 Leaded Bronze Electrode, using the metallic arc.



Building up lateral with the carbon arc.



Fabricated driving box with built up crown brass and laterals after machining.

Here's an important contribution by Airco railroad technical men to lower driving box maintenance costs — saving of locomotive shop time for replacing worn or loose crown brasses and laterals.

First, they developed Airco No. 19, a self-fluxing lead-bronze electrode that produces a deposit designed especially to take the beating to which hub faces and laterals are subjected.

Then they developed a process of depositing this long wearing anti-friction metal by metallic arc or carbon arc welding to form a durable bond with steel without dovetail grooves in the steel face.

Laterals for new boxes can be built up with about half the bronze which would be required for a poured-on surface. Worn laterals previously welded can be again restored to service by the addition of a few pounds of Airco No. 19.

This is one of the modern time- and cost-saving oxyacetylene and arc welding operations described and illustrated in Airco's new 52-page book "Oxyacetylene Flame Processes and Arc Welding in Railroad Mechanical Work." Mail the coupon for your copy today: Air Reduction, 60 E. 42nd St., New York 17, N. Y. In Texas: Magnolia Airco Gas Products Company, Houston 1, Texas.

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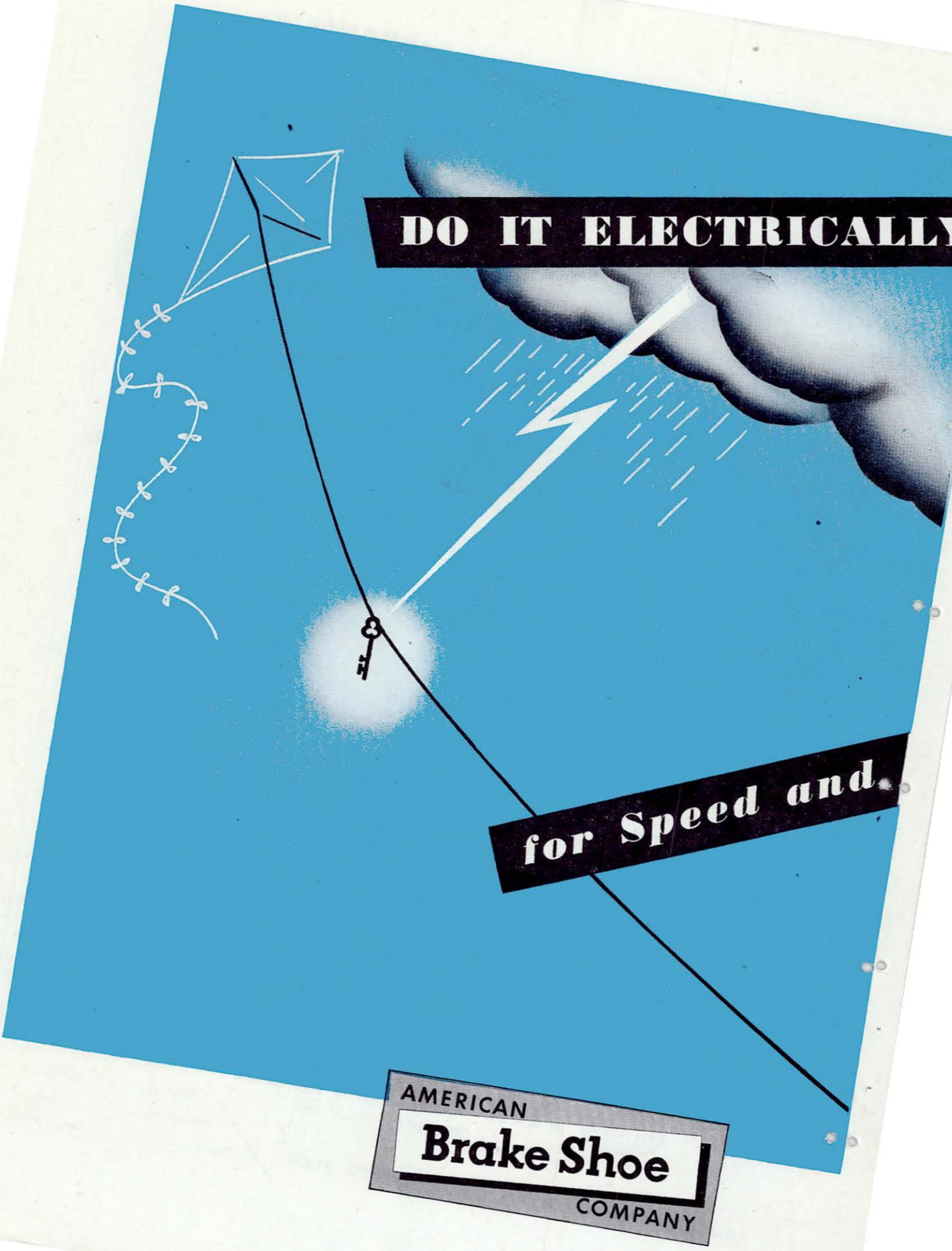
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for Speed and
AMERICAN
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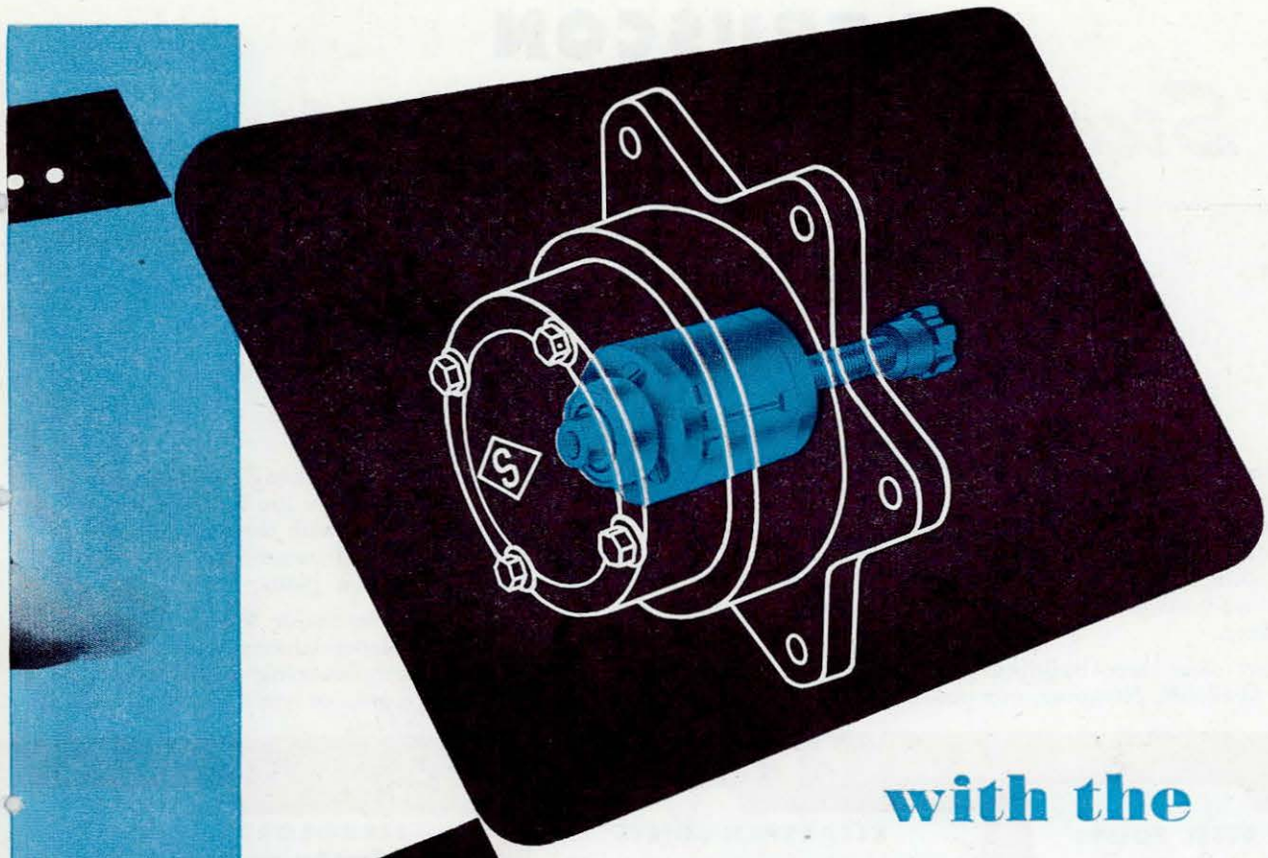

Accuracy with the American Brake Shoe Controller

• Lightning is the symbol of speed. It's the natural symbol since electricity travels with fantastic rapidity . . . performs work almost instantaneously. In the ever-growing use of protective devices, speed and accuracy are the vital factors.

The American Brake Shoe Controller is a quick, accurate *electrical* control to prevent slid flat car wheels. Rugged and simple in its construction, positive and unfailing in its action, control starts the instant slippage begins. Full brake is restored the moment slippage is eliminated — all with the speed of lightning.

One button tests the controller in each truck.

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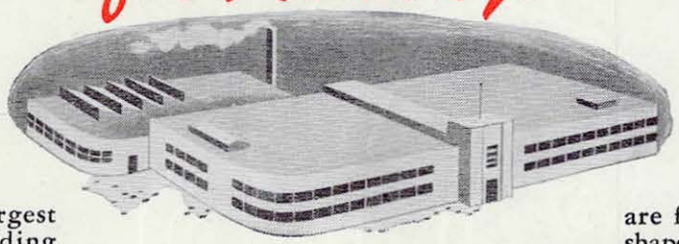
HERE'S YOUR CATALOG OF TRUSCON

Steel Building Products for Railways

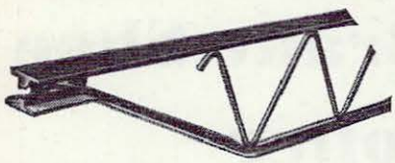


Truscon is the world's largest manufacturer of steel building products. From no other single source can you secure such a wide range of essential, heavy-duty structural units—each one a scientifically designed, well-made product that has been proved by many years of service in railway duty.

At the present time these building products are not immediately available. However, our production plans are finally being molded into shape, and we are bending every effort to reach maximum output with the least possible delay. In the meantime, design Truscon Steel Building Products into your construction plans.

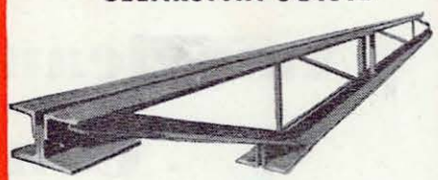
Concentrate on Truscon as the major source of your steel building products—for dependability, for responsibility, and for designing, engineering and delivery service, no matter where you or your job may be.

OPEN TRUSS STEEL JOISTS



Truscon developed the open truss steel joists to meet the demand for economical, light weight, fire-resistant floors in schools, hospitals, apartments and other light-occupancy buildings. They are easy to install. Completely shop fabricated, they reach the job ready for placing.

CLEARSPAN JOISTS

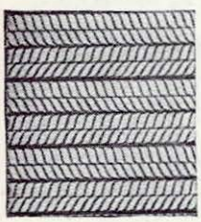


Truscon "Clearspan" Joists meet all clear span requirements up to 64 feet. They eliminate undesirable columns and provide greater unobstructed floor areas.

FERROBORD STEEL DECK ROOFS

Truscon Ferrobord provides a fire-resistant, economical roof deck for all new construction or replacements. Covered with insulation and waterproofing, it weighs approximately 5 pounds per square foot.

DOUBLEMESH HERRINGBONE LATH



A plaster saving lath, designed for a perfect mechanical bond. Sheets are unusually rigid, allowing wider spacing of supports. A complete line of corner beads and other accessories will also be available.

HOLLOW PARTITION STUDS

Truscon hollow partition studs assure permanence, rigidity and economy. They are fire-resistant, provide excellent heat insulation, and sound resistance, are rodent and termite proof. They will not swell or warp and will resist impact, vibration or plaster cracking.

CURB BARS

Protect exposed corners of concrete curbs, walls, steps, etc. Designed to give positive anchorage into the concrete. Plate surrounds and protects the corner without splitting concrete into two portions.

CONCRETE BARS

A special rolled section of high grade steel, with a series of longitudinal and diagonal ribs, so designed to provide the maximum bond with the enclosing concrete.

PRESSED STEEL INSERTS

Truscon Slotted Inserts are attached to the forms and are completely imbedded in the concrete. Bolt can be moved along slot to any location, allowing wide variation in position. Used in ceilings, slabs, beams or columns.

WELDED STEEL FABRIC

Truscon Welded Steel Fabric is made in various sizes for concrete reinforcing in all types of structures, and highways. Each joint is electrically welded for permanence.

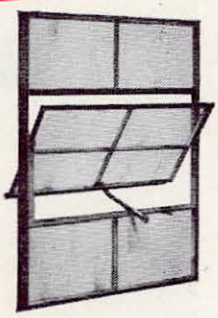
FLOODLIGHT TOWERS

Made in a wide selection of heights, they offer a firm, long-lasting floodlight tower for railroad sidings, airports, factory yards, etc.

PIPE LINE SUPPORTS

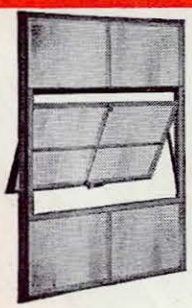
Weltrus Pole sections provide ideal pipe line supports. Correct as to engineering, neat in appearance, economical, permanent and efficient in operation.

PIVOTED WINDOWS



Adaptable to all types of industrial and commercial buildings. Easy to open and close. Come in a wide range of sizes.

COMMERCIAL PROJECTED WINDOWS

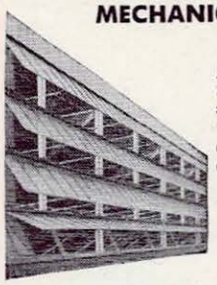


Used widely in buildings where appearance, shading and screening convenience and low cost are required.

DOUBLE-HUNG WINDOWS

Electro-Galvanized steel, bonderized and finished with baked-on priming coat of paint, guaranteed spring balances, factory installed weatherstripping, and attractive hardware. Shipped completely assembled ready for installation.

CONTINUOUS WINDOWS AND MECHANICAL OPERATORS

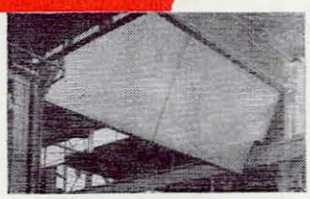


Continuous windows provide large glass areas for admitting daylight and controlled ventilation. Used with properly designed mechanical operators, it is possible to open and close all the windows in each bay or several adjacent bays through one control.

COMPLETE STEEL BUILDINGS

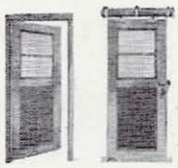
Truscon steel buildings are constructed of standardized fire-resistant units manufactured entirely in the Truscon plant with all the economies of quantity production. Truscon buildings are furnished in all lengths, widths and heights with pitched, flat, monitor, lantern and sawtooth roofs.

CRANE DOORS



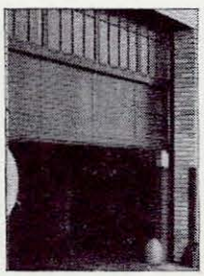
Frequently the cost of this type door can be saved in a single season due to increased efficiency of workmen and fuel savings. Door leaf can be completely filled with sash to permit maximum transmission of daylight. Doors open and close quickly. Usual electric operating speed is 45 feet per minute.

SWING AND SLIDE DOORS



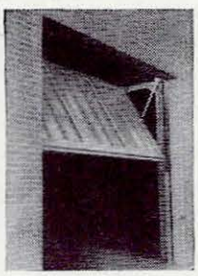
Truscon swing and slide doors are adaptable for use in basements, rear entrances, boiler rooms, fire exits and similar places in residences, hotels, apartments, schools, churches, shops, warehouses, factories, filling stations and stores. They are durably made for heavy usage.

VERTICAL LIFT DOOR



Consists of two leaves, each approximately one-half the opening height, sliding vertically upward. The meeting rail-joint between the two leaves is effectively weathered. Rubber weathering can also be applied at the top and to the bottom rail.

TWO SECTION TURNOVER DOOR



Designed for rapid operation, they are effective barriers to infiltration of cold air and resultant heat loss in industrial buildings of all types. An important advantage of this type door is the reduced clearance required inside the building for opening and closing these doors.

WELTRUS HIGHWAY CROSSINGS

Truscon Weltrus Steel Crossings provide a permanent crossing combining strength, durability and economy, with extreme simplicity of design. Weltrus track sections are made of rolled steel channels, ribbed at the side with the section ends completely closed. The center reinforcing bar web, sides and ends, are electrically welded into a homogeneous unit.

TRUSCON STEEL COMPANY

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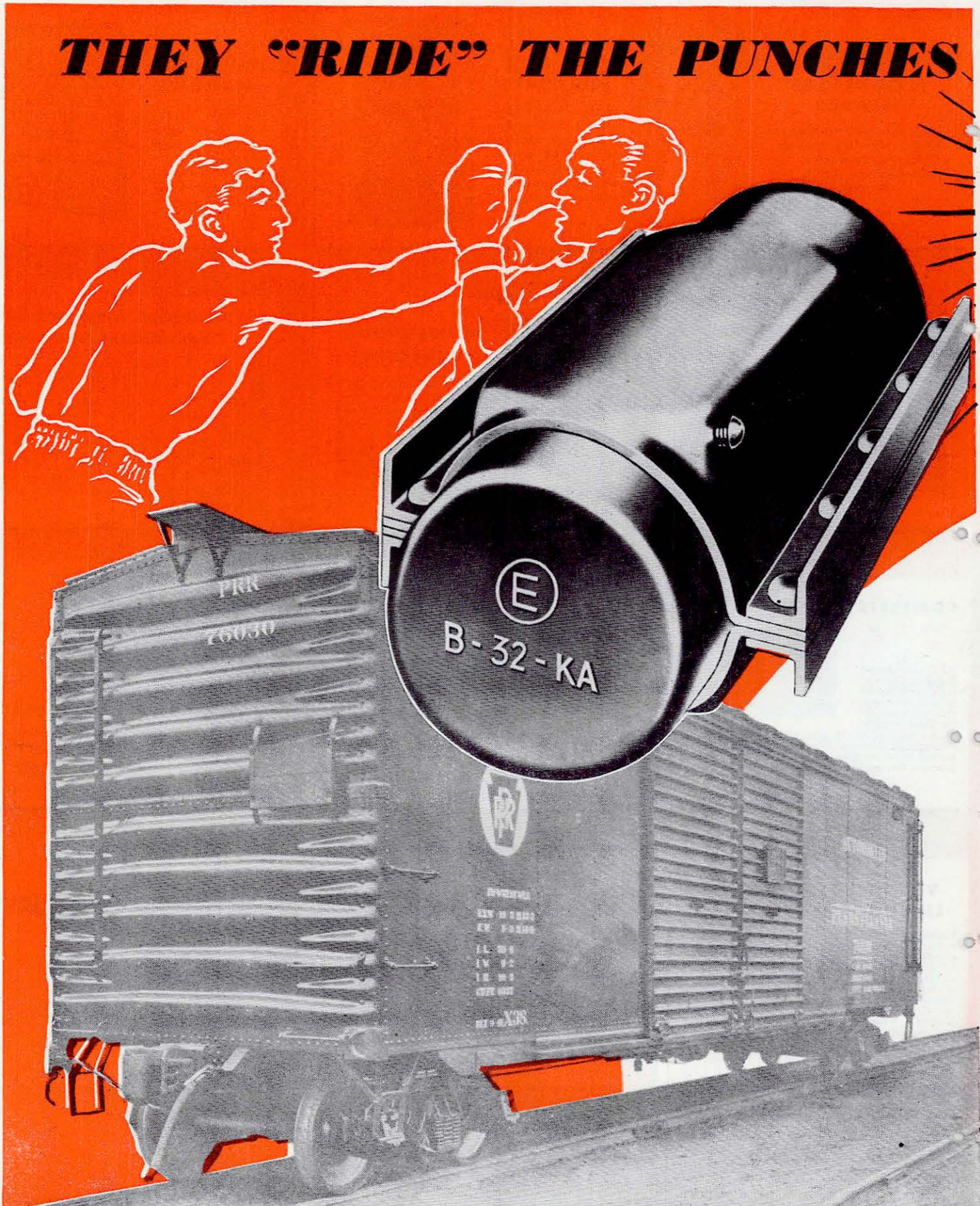
Manufacturers of a Complete Line of Steel Windows and Mechanical Operators . . . Industrial Steel Doors . . . Steel Joists . . . Metal Lath . . . Complete Steel Buildings . . . Steeldeck Roofs . . . Reinforcing Steel . . . Radio Towers . . . Steel Boxes and Platforms . . . Foundry Flasks . . . Weltruss Crossings.

THEY "RIDE" THE PUNCHES



EDGEWATER STEEL COMPANY · PITTSBURGH, PA.

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KNOCK OUT CARS AND LADING

Edgewater

RING SPRING DRAFT GEARS

TO STAY off the canvas, a fighter "rides" or gives way to blows he cannot dodge. That, essentially, is what a draft gear does to save car and lading from punishment. So picture the punches your cars must take and provide them with the ample and sure protection of Edgewater Ring Spring Draft Gears.

Edgewater's exclusive ring spring principle is proved by laboratory and service tests to give the maximum in all of these good draft gear essentials: High Capacity — Endurance — Smooth Action — Quick Release — Simplicity — Uniformity.

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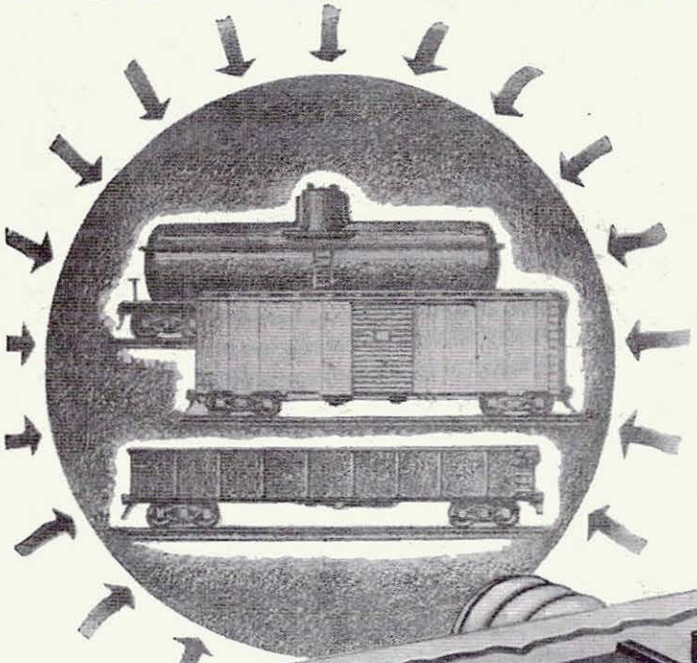
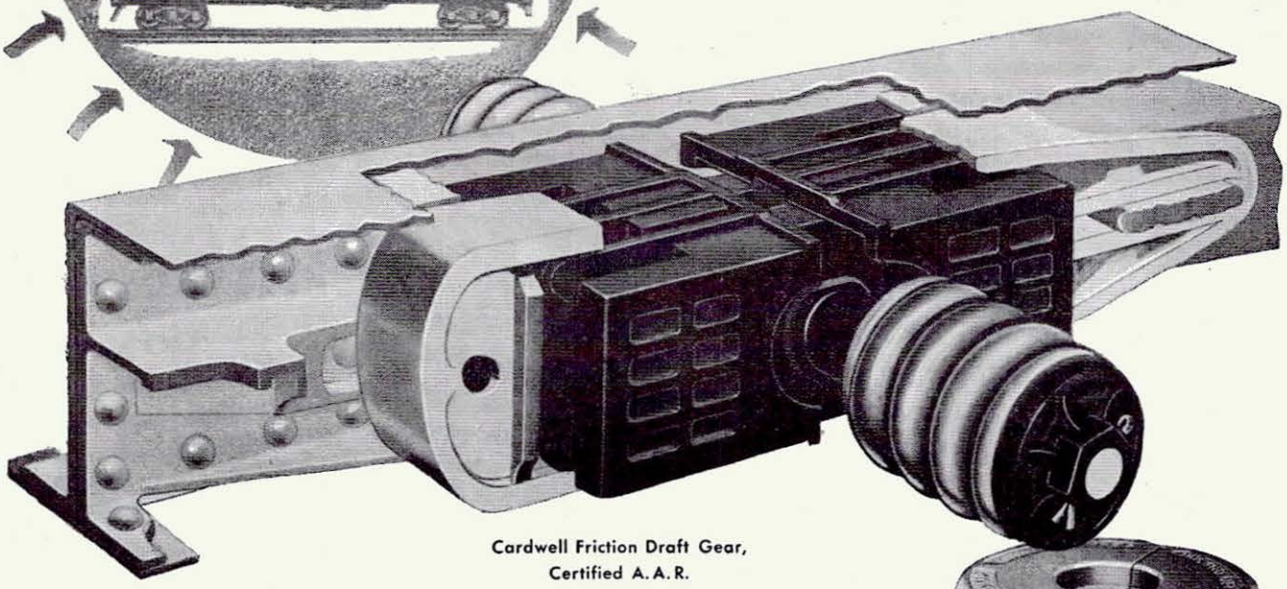
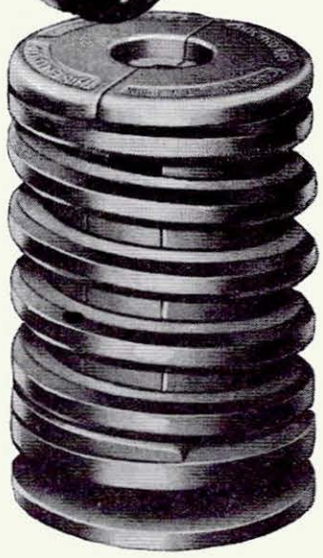
For All-round Protection



Specify Cardwell Friction Draft Gears; Cardwell Friction Bolster Springs



Cardwell Friction Draft Gear, Certified A. A. R.



Cardwell Friction Bolster Spring

Cardwell Friction Draft Gears and Friction Bolster Springs absorb horizontal, vertical and lateral shocks and oscillations, thus reducing damage claims and car maintenance.

Over 98% of the cars in freight carrying service are A. A. R. Construction, and over 96% have friction Draft Gears.

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1876

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Revenue-builder for railroads

FAIRBANKS-MORSE Diesel Locomotives increase railroad income two important ways.

First, they attract both passenger and freight business by their major contributions to on-time performance and faster schedules.

Second, they reduce operating costs. They make highly efficient use of low-cost fuel. Their maintenance and servicing costs are low... the diesels are simple and easily maintained, and there are from one to three less diesels per locomotive because each Fairbanks-Morse Diesel develops *2000 horsepower*. Fairbanks, Morse & Co., Chicago 5, Ill.

Fairbanks-Morse

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Motors • Stokers • Railroad
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BODY LEVERS UP TO 52½" IN LENGTH

In connection with new cars now in design, remember that Schaefer can forge body levers up to 52½"—can cut lever weight one-third—show more strength than a solid lever—and, by using our *own* pad structure, take care of all intermediate length variations.

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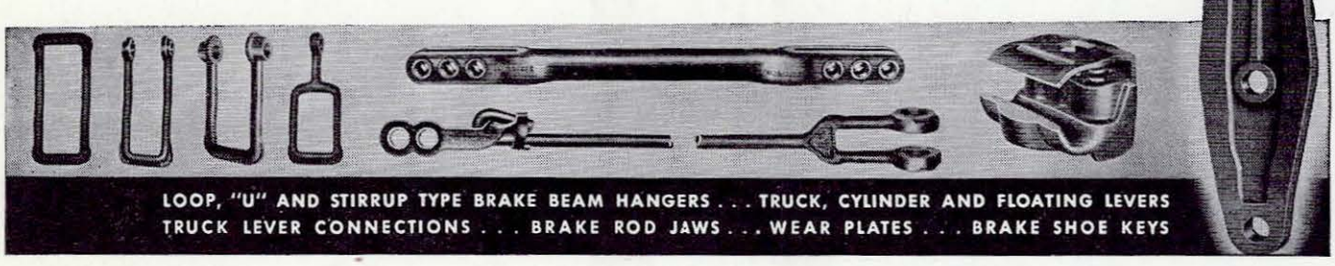

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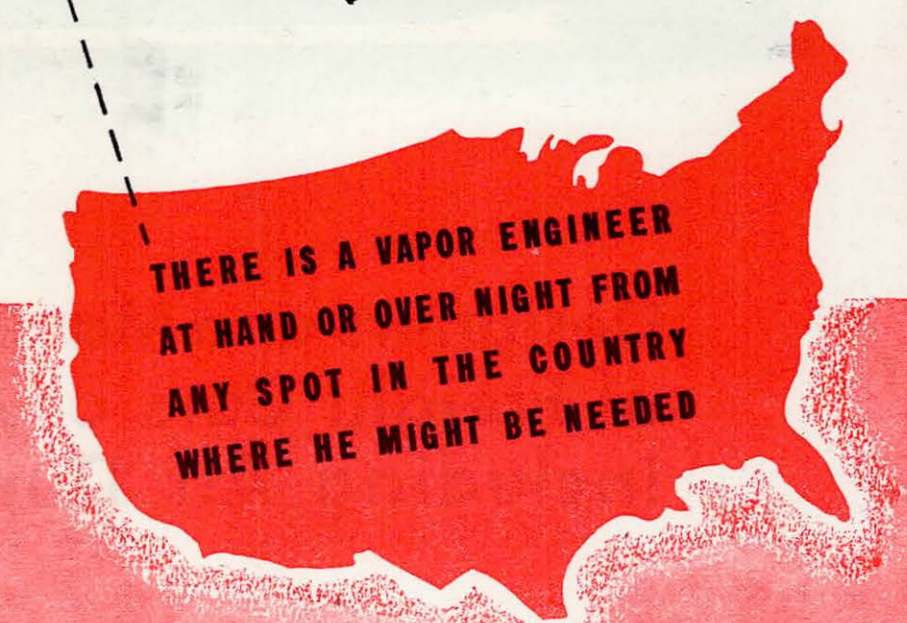
Vapor Instruction Meetings are held each year during the heating season at all principal railroad terminals.

The meetings are attended by maintenance forces from all the railroads in the surrounding territory and they include illustrated slides of all Vapor equipment with a thorough discussion of their principle of operation and maintenance.

This is an added service that goes with all Vapor equipment, keeping the operating and maintenance forces thoroughly familiar with developments and desired practices.



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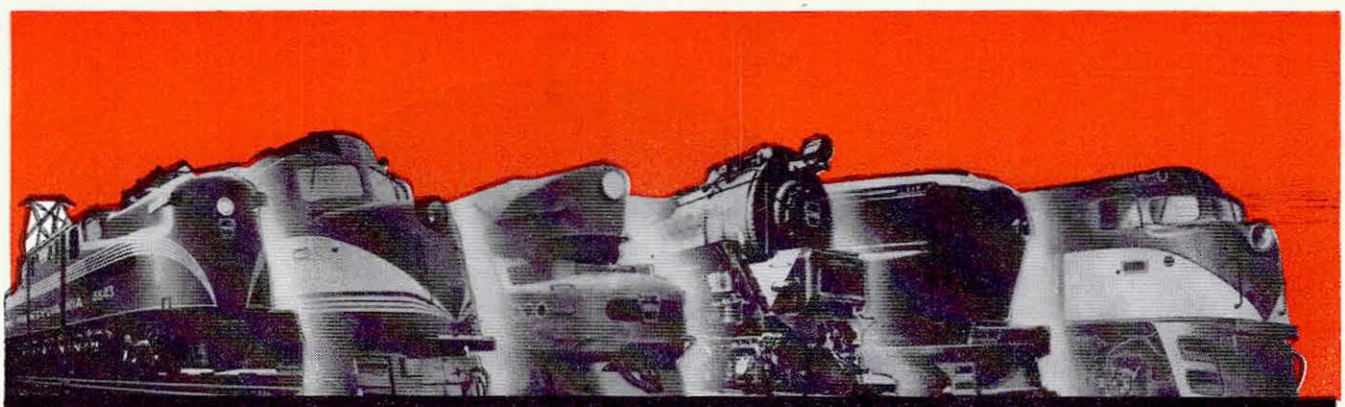
PANTASOTE UPHOLSTERY — Pantasote's new plastic upholstery adds sparkle and comfort to modern railway interiors.

PANTASOTE CAR CURTAINS—made from two laminated fabrics to prevent wrinkling and to give added strength, longer wear.

PANTASOTE VESTIBULE CURTAINS — for cleaner, brighter, well-protected railway vestibules.

3 PANTASOTE PRODUCTS — each specifically designed for railway uses. That's why Pantasote has been standard on railroads for over half a century. Pantasote Products age well, remain good-looking year after year, and are manufactured in a wide variety of colors and finishes. They're easy to clean, too — just wipe with a damp cloth.

THE PANTASOTE CORPORATION OF NEW JERSEY, 444 Madison Ave., NEW YORK CITY 22



PHOTOGRAPH COURTESY WESTINGHOUSE ELECTRIC CORPORATION.

All operate on TIMKEN ROLLER BEARINGS

Timken Roller Bearings make all types of modern motive power perform more efficiently; increase their availability; reduce operating and maintenance costs.

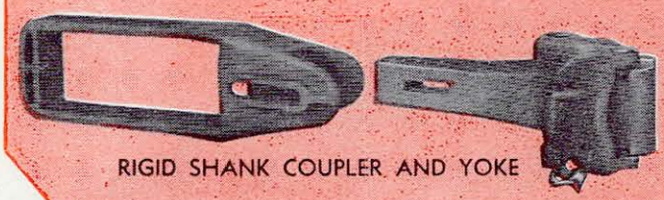
Sixteen years ago the Timken locomotive demonstrated conclusively the value of roller bearings for motive power; since that time a constant swing to Timken Bearings for all types of locomotives has been in progress.

Today there is hardly a new locomotive of any type built that does not have them. The railroads know it pays — and so do the locomotive builders. The Timken Roller Bearing Company, Canton 6, Ohio.

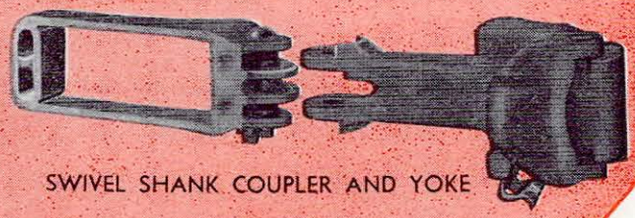
TIMKEN
TRADE-MARK REG. U. S. PAT. OFF.
RAILWAY ROLLER BEARINGS

BUCKEYE

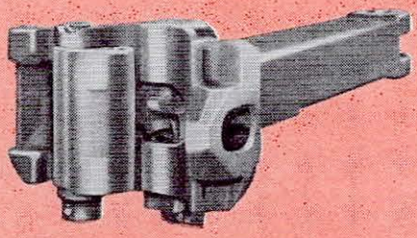
STEEL CASTINGS FOR RAILWAY EQUIPMENT

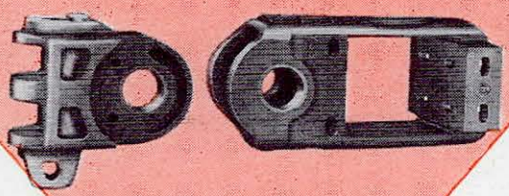


RIGID SHANK COUPLER AND YOKE

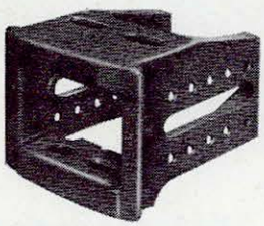


SWIVEL SHANK COUPLER AND YOKE

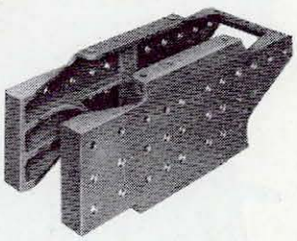




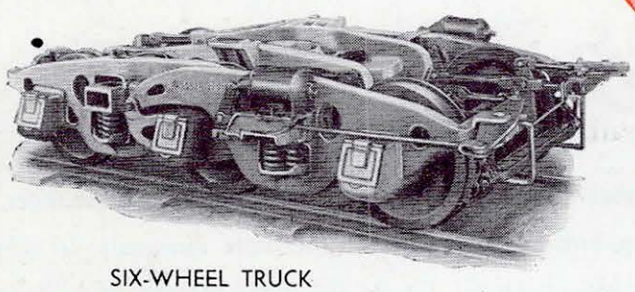
TYPE "H" TIGHTLOCK COUPLER
AND ATTACHMENTS



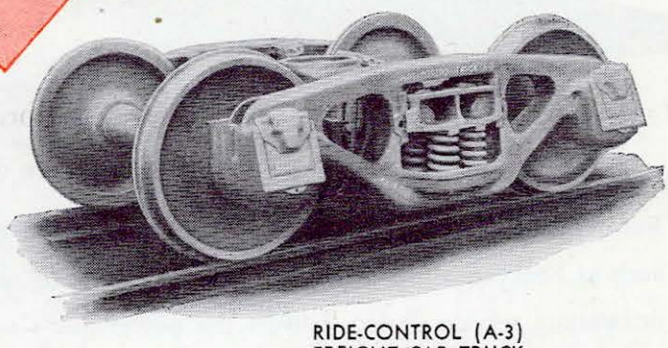
STRIKING CASTING



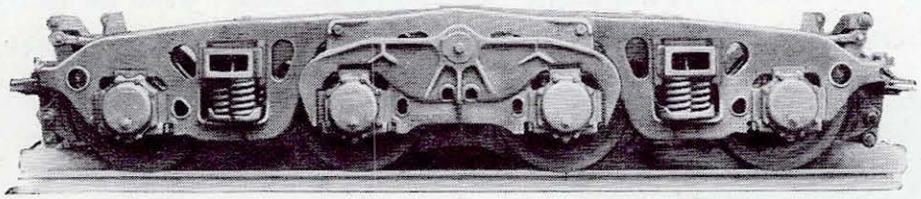
BOLSTER CENTER FILLER



SIX-WHEEL TRUCK



RIDE-CONTROL (A-3)
FREIGHT CAR TRUCK



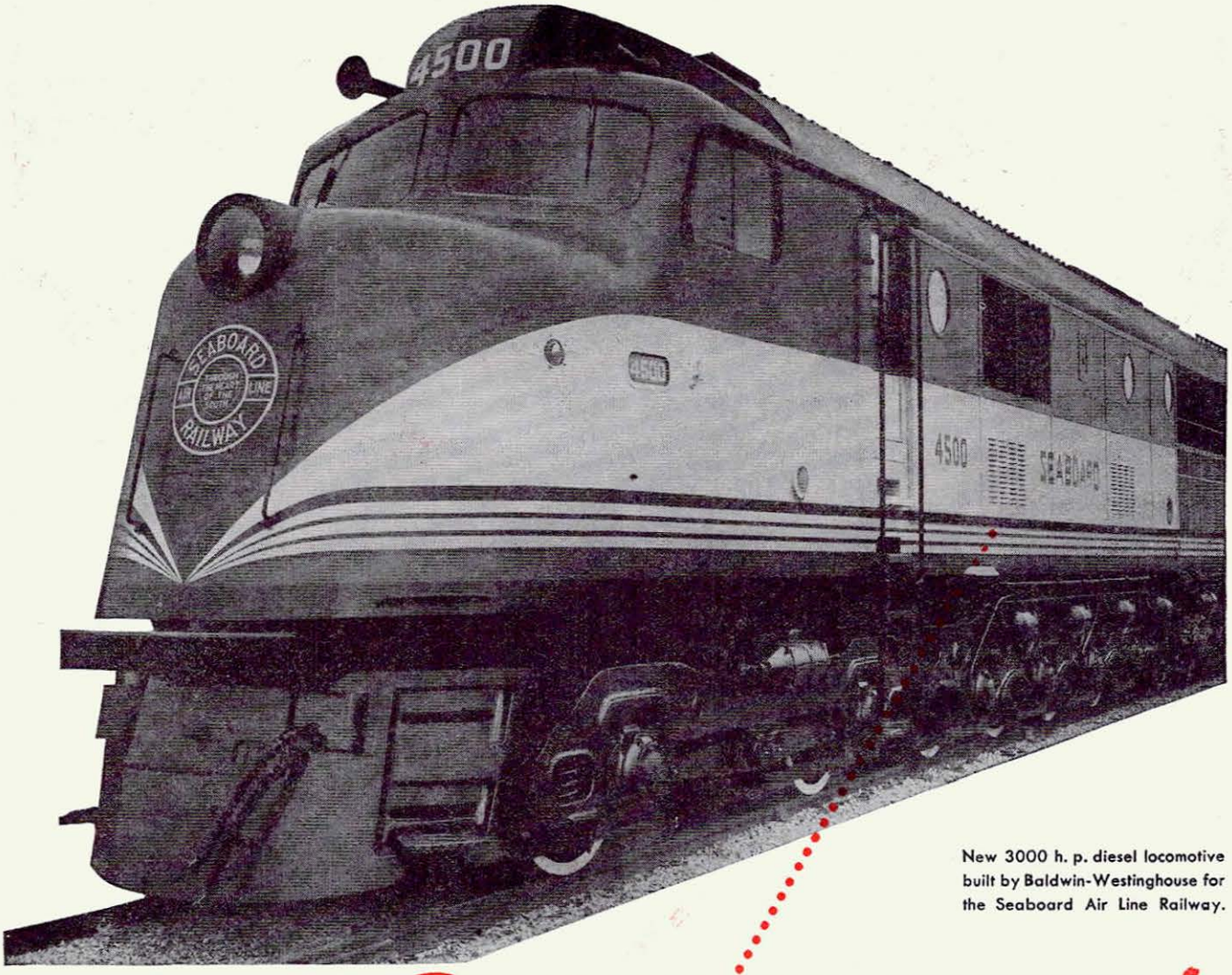
EIGHT-WHEEL TRUCK

B

THE BUCKEYE STEEL CASTINGS COMPANY

New York, N. Y. Columbus, Ohio Chicago, Ill.

WORLD'S LARGEST DIESEL-



New 3000 h. p. diesel locomotive built by Baldwin-Westinghouse for the Seaboard Air Line Railway.

PHILCO-EQUIPPED!

For dependable all-weather starting a Philco railroad diesel battery provides many outstanding advantages, such as heavy positive plates with extra power and snap, and low-resistance copper core terminals. In this demanding service Philco delivers the power that's needed—*instantly!* To get the extra margin of built-in ruggedness and efficiency specify Philco, the diesel battery with the all-weather "kick". Write for specification data . . . PHILCO CORPORATION, Storage Battery Division, Trenton 7, New Jersey.

PHILCO

FOR FIFTY YEARS A LEADER IN
INDUSTRIAL STORAGE BATTERY DEVELOPMENT

New Constant Voltage Generator in

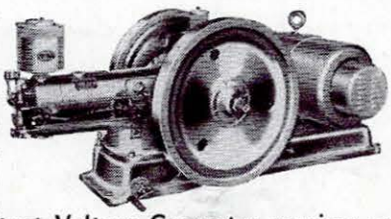
WITTE DIESELECTRIC PLANTS

multiplies WITTE'S Railway installations

NON-MECHANICAL, FULLY ELECTRICAL

it works at the speed of electricity

a-u-t-o-m-a-t-i-c-a-l-l-y

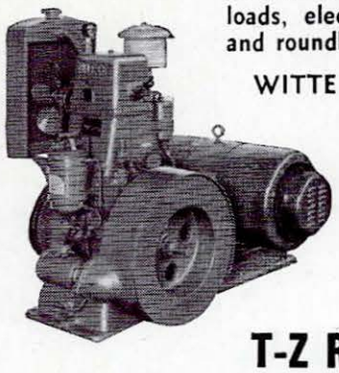


The revolutionary circuit of the Constant Voltage Generator maintains ***continuous*** voltage . . . regardless of sudden or frequent load-changes . . . solving this problem long baffling to electrical scientists. Now standard equipment for both vertical 7.5 and horizontal 10 KVA WITTE Dieselectric Plants the Constant Voltage Generator requires no adjustments or other attention; has no moving parts or instruments—no rheostat. Operation is entirely automatic, entirely electrical—***and at the speed of electricity.***

NO SLACKENED MOTOR SPEED ——
NO DIMMED LIGHTS . . . .

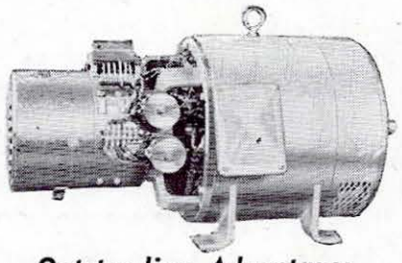
no matter how sudden or frequent the changes of load on THIS generator!

Undoubtedly the most far-reaching advancement announced in all of WITTE'S more than 75 years, it has already multiplied railroad installations of WITTE Dieselectric Plants. For railroad men naturally are well aware of what non-lagging, non-drooping voltage means—on automatic electric driven water pumps; on isolated electric loads, electric and air operations in freight-yards and roundhouses, wayside stations, etc.



WITTE Dieselectric Plants are ***full*** Diesels, as efficient as they are compact. They start and operate on the ***same*** low-cost Diesel fuel; produce uninterrupted electric power for lighting or other uses for as little as 1¢ fuel-cost per kilowatt hour. You are invited to obtain full information from our exclusive railroad distributors—

T-Z RAILWAY EQUIPMENT CO.
8 So. Michigan Ave., Chicago 3, Ill.



Outstanding Advantages Realized in Revolutionary Automatic Constant Voltage

1. No drag . . . no lag . . . no droop! No big voltage change from no-load cold to full-load hot. This is ***not*** a so called "close-regulated" generator.

2. The constant voltage circuit is over-compounding—offsets the effect of normal engine speed droop as load is applied.

3. No tubes or other delicate equipment; no moving parts. Entirely electric; faster than mechanical regulator.

4. Starts large motors. The high-ceiling voltage of exciter and superior voltage-holding power enables starting larger motors than on "close-regulated" generators.

5. High quality construction. The WITTE Dieselectric Plant and the WITTE Constant Voltage Generator were "made for each other"—matching in quality for reliable performance.

6. Easy replacements. Should performance failure ever occur, the constant voltage regulator section can be quickly replaced, because of its unit construction.

7. Standard parts used. Only well-established electrical units are used, assuring years of trouble-free operation.

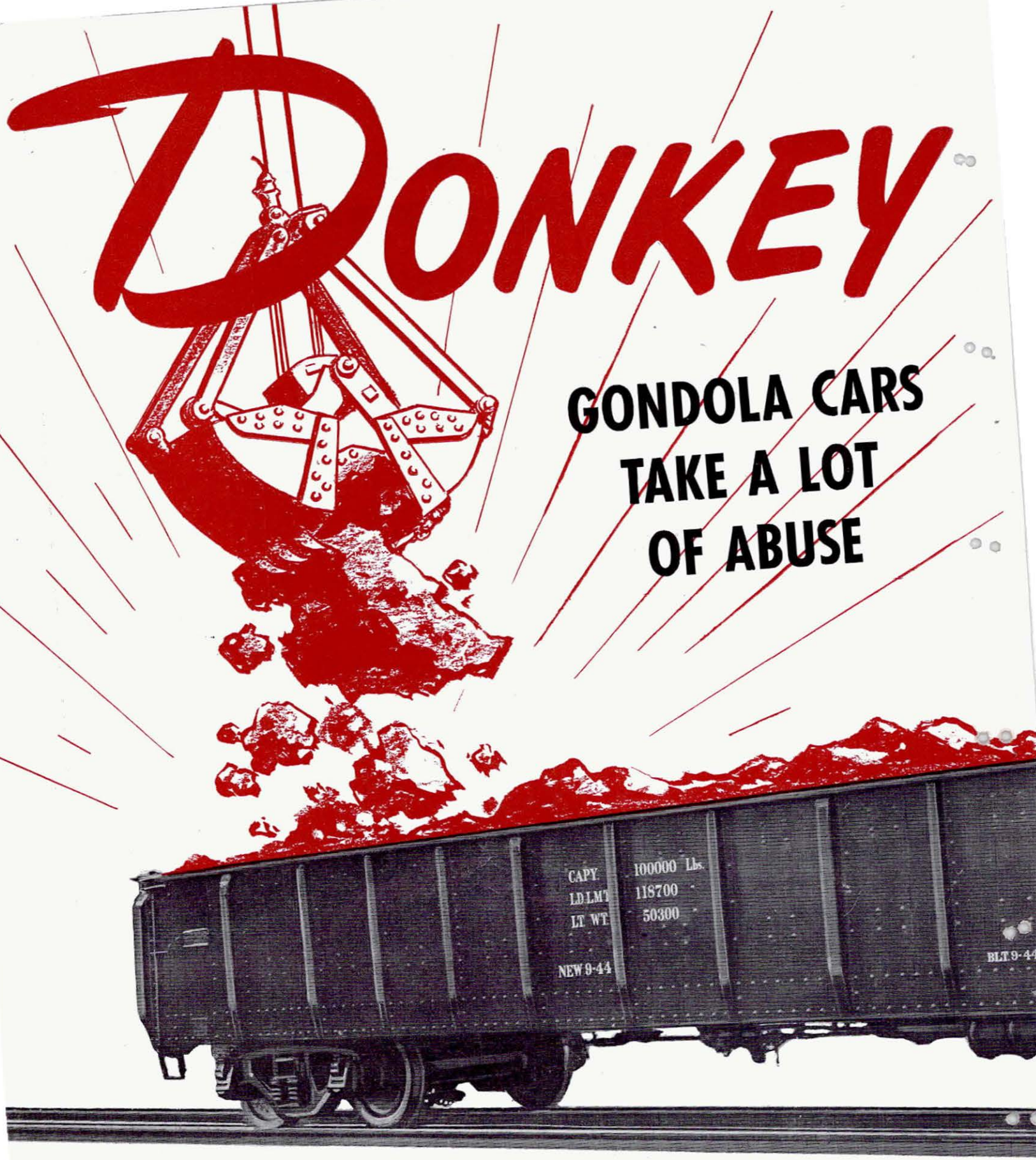
WITTE ENGINE WORKS

DIVISION OF OIL WELL SUPPLY COMPANY — UNITED STATES STEEL CORPORATION SUBSIDIARY

LARGEST BUILDER OF SMALL DIESELS — KANSAS CITY 3, MO., U.S.A. CABLE WITTEKCMO

DONKEY

GONDOLA CARS TAKE A LOT OF ABUSE



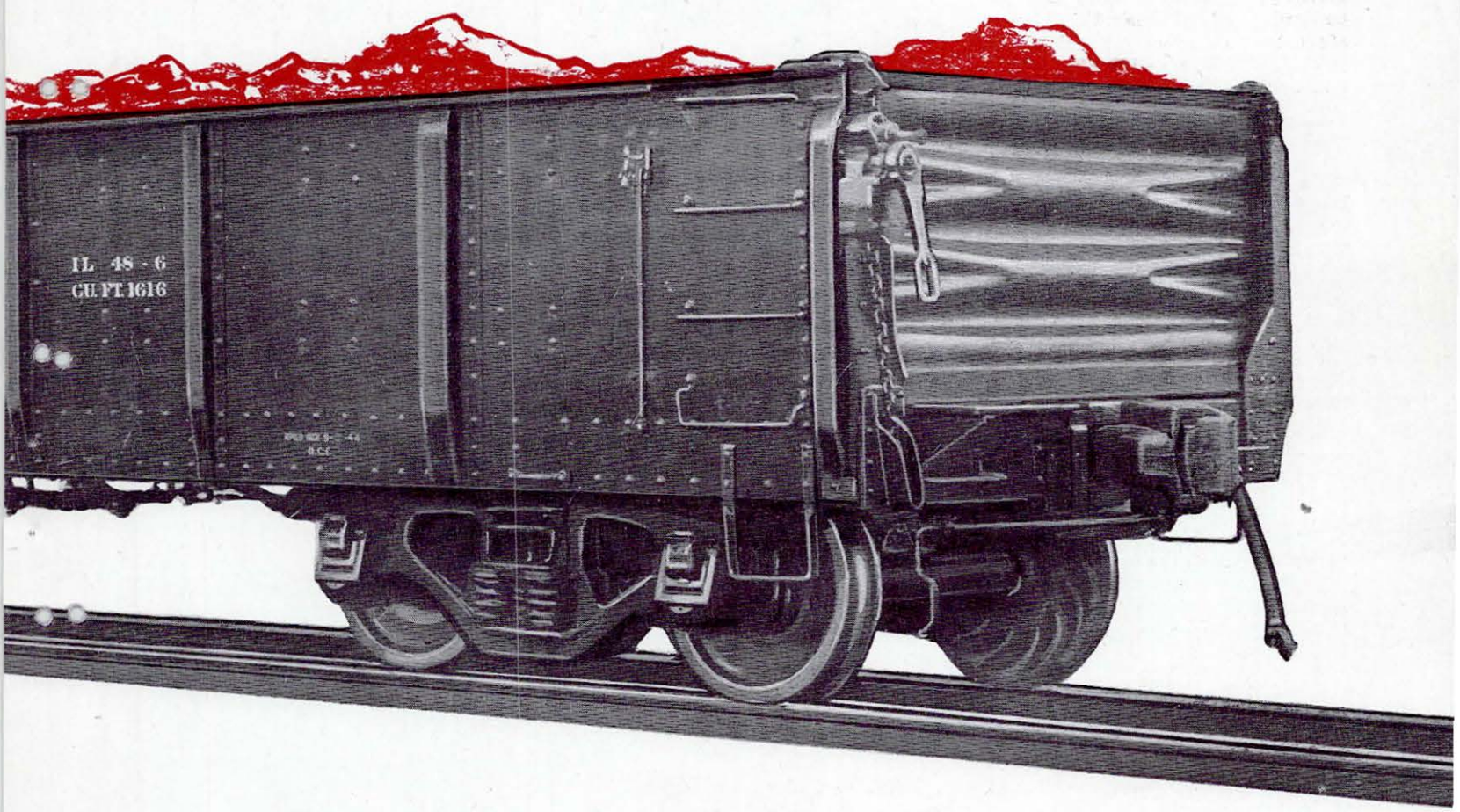
a,c,f,

AMERICAN CAR AND FOUNDRY COMPANY

OF THE RAILS

As the "donkey of the rails" Gondola Cars are called upon to handle practically every type of lading including steel, ore, scrap, and heavy machinery. To withstand rough treatment in loading and dumping sturdy construction is required for long life.

A.C.F. Gondola Cars are as "tough as a mule" to withstand a "pushing around" on the job. That is why the railroads buy thousands of A.C.F.-built Gondola Cars.



NEW YORK · CHICAGO · ST. LOUIS · CLEVELAND · PHILADELPHIA · WASHINGTON · PITTSBURGH · SAN FRANCISCO

Why must sleeping car passengers put up with "rolling tenements"?

9 Out of Every 10 Sleeping Cars Now in Service Belong in Museums! What Can Be Done About It?

ANYONE who ever takes an overnight train trip owes it to himself to read these facts:

The average age of the 6,800 sleeping cars now in operation is almost 22 years. Nearly 25% of them were built before the first world war. (Would you expect a comfortable ride in an automobile built between 1910 and 1915?)

Compared to really modern sleepers, these old cars are as out of date as high button shoes! And to ride in these jittering tenements on wheels, 25 to 35 years of age, the traveler pays a premium fare. Is it any wonder railroads are losing business to the airways and the highways?

What's the Reason?

Don't think this situation is due to the war. It existed long before the war. Only 900 sleeping cars—a mere 13% of those now on the rails—were built in the last 16 years, and less than 9% are of modern lightweight design.

With over 6,000 new sleepers needed, only 764 had been ordered as of June 1. These were ordered in small lots of varied design by 25 big railroads for their own use. (More than 30 other roads that operate sleeper service did not have a single sleeping car on order!)

Not only does this piecemeal method of buying mean that the new cars will be ill-fitted for through service; it is one of the principal reasons why they will cost four times as much per pound to build as an automobile.

Since last September, the C & O has tried in vain to get other railroads to agree on sleepers of standardized designs and to place sufficient orders so that all railroads can gain the economies of mass production.

Our efforts have been given no encouragement. We are tired of waiting and so are the travelers we serve. Apparently, the only way the C & O can get modern sleepers is to have its own built!

We Will Wait No Longer!

We of the C & O lines will not sit by idly while our night passengers travel in outdated rolling tenements. We are now inviting bids from manufacturers on enough modern sleeping cars to replace every sleeper on our lines, with a substantial margin to spare.

We have taken this step, independently, with great reluctance. To supply our own sleeping equipment, it is necessary to buy not only enough cars to meet our routine requirements — but with no pool of modern equipment to call upon, we must also provide for seasonal and other peaks.

This is not the most economical way to secure modern sleeping car service. But, as far as we can see, it is the only way open to us.

The C & O Repeats Its Offer!

The present situation is plain bad business. People want modern equipment. They have shown themselves eager to travel on the railroads that provide it. Even before the war, new lightweight streamliners were packed to capacity on routes where their old-fashioned predecessors had traveled half empty.

The demand for travel accommodations has never been greater than it is today. Yet ancient sleeping cars still clutter up the rails while the airways and highways shine with new models. It doesn't make sense!

The need is self-evident for an efficient, new sleeping car operating company which can and will buy modern cars competitively in quantity and service them economically. The past record of America's only sleeping car operating company offers little encouragement that it will fill these needs. We will gladly release all the new cars we purchase to any independently operated pool that will demonstrate an interest in making modern sleeping car equipment available to all railroads, at reasonable cost. If the other roads will do as much, it should be easily possible to attain this objective.

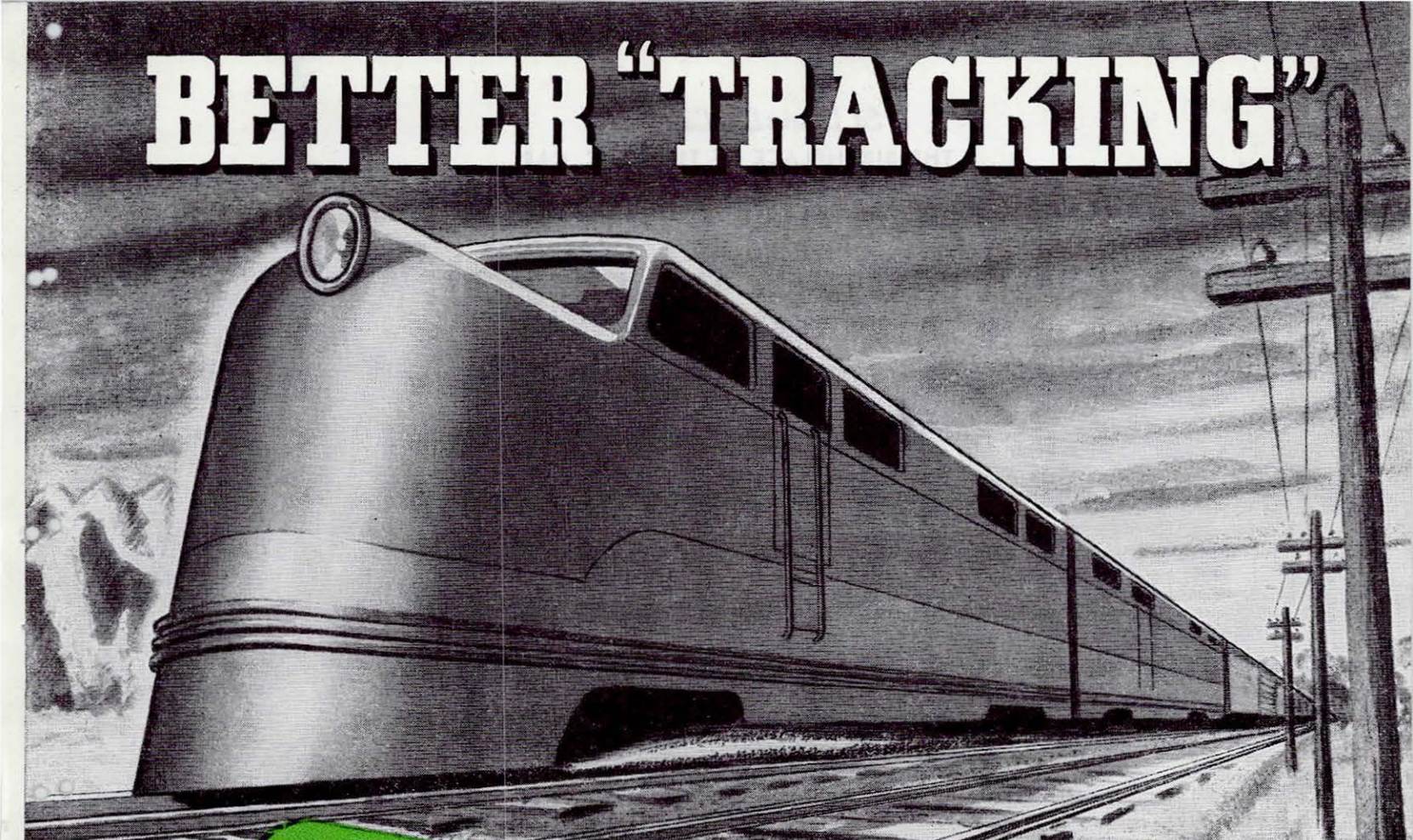
What roads will co-operate in this drive to give the traveler better service at lower cost?

The Chesapeake and Ohio Lines

Terminal Tower, Cleveland 1, Ohio

CHESAPEAKE AND OHIO RAILWAY
NICKEL PLATE ROAD
PERE MARQUETTE RAILWAY

BETTER "TRACKING"



This Smooth-Running Truck Cuts Lading Damage Claims

A first-time ride over Ride-Control Trucks is an *eye-opener*, particularly when cars provide a view of the trucks in action. "Better tracking" can scarcely describe the *smoother* operation.

The same uniform friction which controls *up-and-down* motion of soft, long-travel truck springs also gives the Ride-Control Truck *ideal* tracking characteristics.

Axles float freely. Yet lateral bolster movement is cushioned by *constant* friction between bolster and side frames, and resisted by the truck springs which return the bolster to normal position as side pressure is relieved. *Balanced* pressures at the ends of the bolster resist misaligning forces —act to "square" the truck on straightaways.

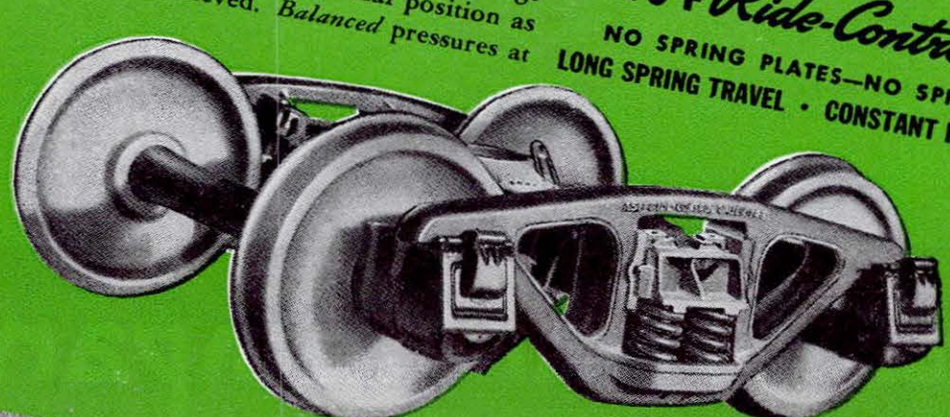
This better, smoother freight car truck protects lading from *all types* of rail shocks—at all loads, *all speeds.*

Over 25,000 sets of this modern freight car truck are already in service or on order for 52 railroads and private car owners.

A·S·F *Ride-Control* TRUCK

NO SPRING PLATES—NO SPRING PLANKS

LONG SPRING TRAVEL • CONSTANT FRICTION CONTROL



AMERICAN STEEL FOUNDRIES

MINT-MARK OF ⬡ FINE CAST STEEL

St. Louis Car Company

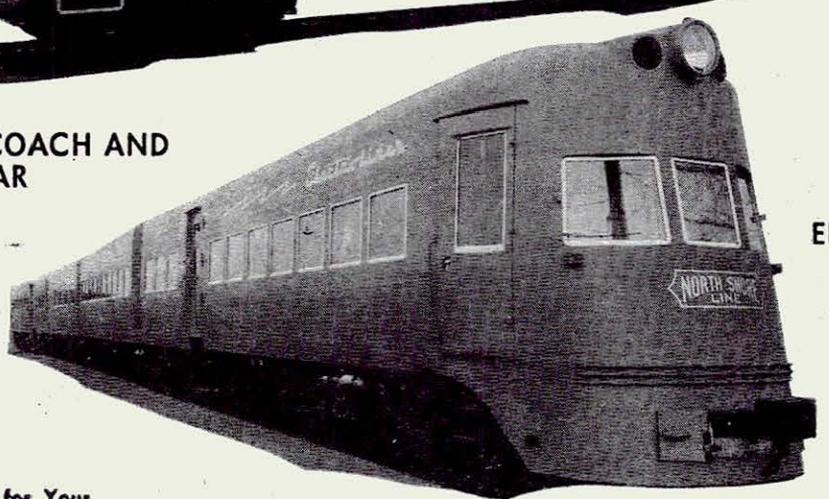
THE BIRTHPLACE OF THE P.C.C. CAR

BUILDERS OF Passenger and Freight Equipment for Steam Railroads, Subway Cars, Elevated Cars, Interurban Cars, P. C. C. CARS AND TROLLEY COACHES

DIESEL ELECTRIC TRAIN

COMBINATION COACH AND MAIL CAR

ELECTRIC TRAIN



Consult Us Now for Your QUALITY CAR EQUIPMENT

QUALITY is our aim in offering railroads the best available rolling stock at all times, keeping abreast of modern design and practices.

We are equipped to supply the best and latest types of rolling stock as required to maintain heavy transportation demands.

1887 — St. Louis Car Company, St. Louis, Mo. — 1946

In Our Second Half Century

The Range of Products Manufactured at Our 60-Acre Car Plant

DIESEL ELECTRIC POWER CARS AND TRAINS

Passenger Cars	Caboose Cars
Streamlined Trains	Subway Cars
Chair Cars	Elevated Cars
Dining Cars	Interurban Cars
Freight Cars	Trolley Coaches

Baggage Mail Express Cars
P.C.C. Street Cars

EXECUTIVE OFFICES & PLANT St. Louis

New York Office 353 W. 56th St.

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San Francisco Office Monadnock Bldg.

St. Louis Car Company

St. Louis, Mo.

7 advantages

A. A. R. Approved

1. **Smooth Action**
2. **Positive Release**
3. **Low Recoil**
4. **High Absorption**
5. **Light Weight** - *permitting heavier payloads*
6. **Long Life** - *because of rugged construction*
7. **Trouble Free** - *resulting from sound engineering and careful manufacture*

PEERLESS EQUIPMENT Company

332 South Michigan Avenue
Chicago 4, Illinois

MASSMO The Angora King *is making the Spring Clip serve your transportation fabric needs—*

MASS MOHAIR IS AVAILABLE NOW...

filling orders out of stock—as always, serving the transportation industry's requirements with foresight and know-how.

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Inside and Out

I. B. LOCOMOTIVE CRANES ARE BUILT FOR TOP PERFORMANCE

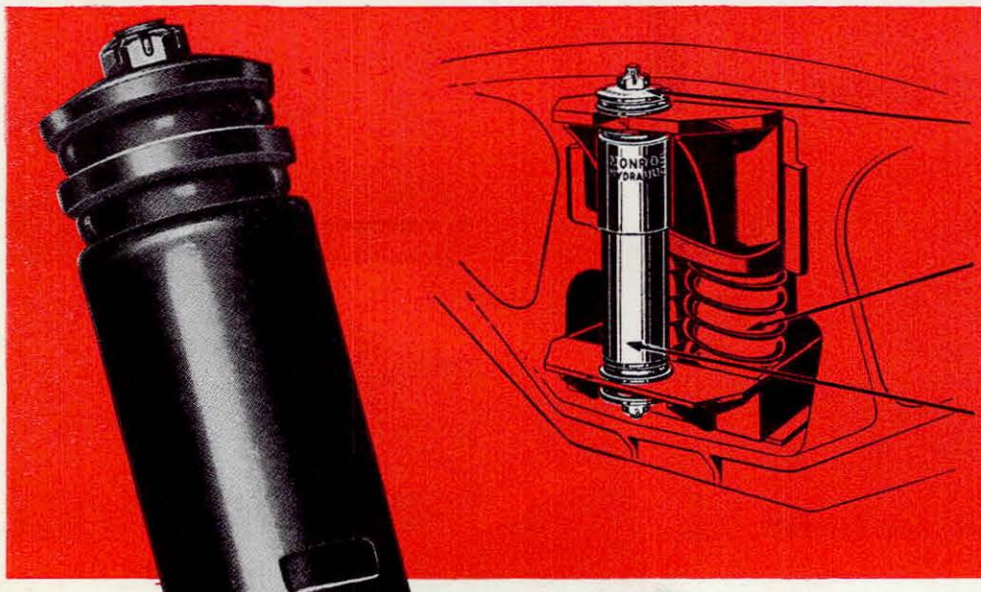
Inside and out, Industrial Brownhoist Locomotive Cranes have the design and construction features necessary to handle materials with the greatest ease and all-round economy. Air and manual controls, placed within quick, easy reach of the operator, provide the sure, sensitive response that makes lifting and spotting the heaviest, bulkiest materials a routine job. Anti-friction bearings at all essential points minimize maintenance. One-piece cast steel bed insures rigidity of mechanism thus prolonging crane life. Rotating and travel friction disc clutches with one-point adjustment reduce wear and strain to mechanism. Monitor type cab gives safe 360° visibility. These are only a few of the many reasons why I.B. Locomotive Cranes give you top performance in dependable, economical materials handling with magnet, hook, or bucket. Write for complete particulars.

INDUSTRIAL BROWNHOIST BUILDS BETTER CRANES

INDUSTRIAL BROWNHOIST CORP. • BAY CITY, MICH. • District Offices: New York, Philadelphia, Cleveland, Chicago • Agencies: Detroit, Birmingham, Houston, Denver, Los Angeles, San Francisco, Seattle, Vancouver, B.C., Winnipeg, Canadian Brownhoist Ltd., Montreal, Quebec.

MONROE

HYDRAULIC SHOCK ABSORBERS INSTALLED WITHOUT REMOVING ANY SPRING UNIT



Hydraulic Shock Absorber easily demountable

No need to remove any spring unit

The Monroe Shock Absorber—because it is hydraulic — insures more uniform action and longer efficient service.

Quickly and Easily Installed on Your Present Equipment without Sacrificing Any Spring Capacity

Thoroughly accepted as an outstanding engineering development, Monroe's new Direct-Double-Action *Hydraulic* Shock Absorber for railway cars incorporates the same exclusive Monroe Airplane Type *Hydraulic* Shock Absorber principles that have proved their superior value over millions of railway car miles.

Monroe's may be quickly and easily installed on your present equipment without removal of any spring unit . . .

- . . . . *to check progressive harmonic motion*
- . . . . *to control vertical and swaying action*
- . . . . *to protect lading, equipment and roadbed*
- . . . . *to reduce maintenance costs and damage claims*
- . . . . *to make higher speeds safer and practicable*

Monroe engineers promptly available to work with you on Monroe application to rehabilitation of your present equipment or to the design of new equipment. Write or wire:

RAILWAY SUPPLY DIVISION
CHICAGO OFFICE
3001 Willoughby Tower Bldg.
WASHINGTON, D. C., OFFICE
1028 Connecticut Ave., N.W.

MONROE AUTO EQUIPMENT CO., MONROE, MICH.

Check up on PSF QUALITY for your High Tensile Jobs

When you're on the lookout for steel castings that must develop high tensile strength, look in on PSF. Castings for highly stressed applications or pressure work are a specialty of ours—a field in which we have a rich background of experience and proved performance. Illustrated above are a number of locomotive wheel centers, cross heads, driving boxes, etc., cast from alloy steel and heat treated for special characteristics. The alloy is a distinctive analysis with PSF, but—and this is important—we've also developed treatments that get remarkable strength results with ordinary carbon steel. Let us check with you on your high-tensile jobs—in fact, *all* of your steel casting requirements, in any size from a pound or two to fifty tons and over.

48 YEARS OF STEEL CASTING KNOWLEDGE

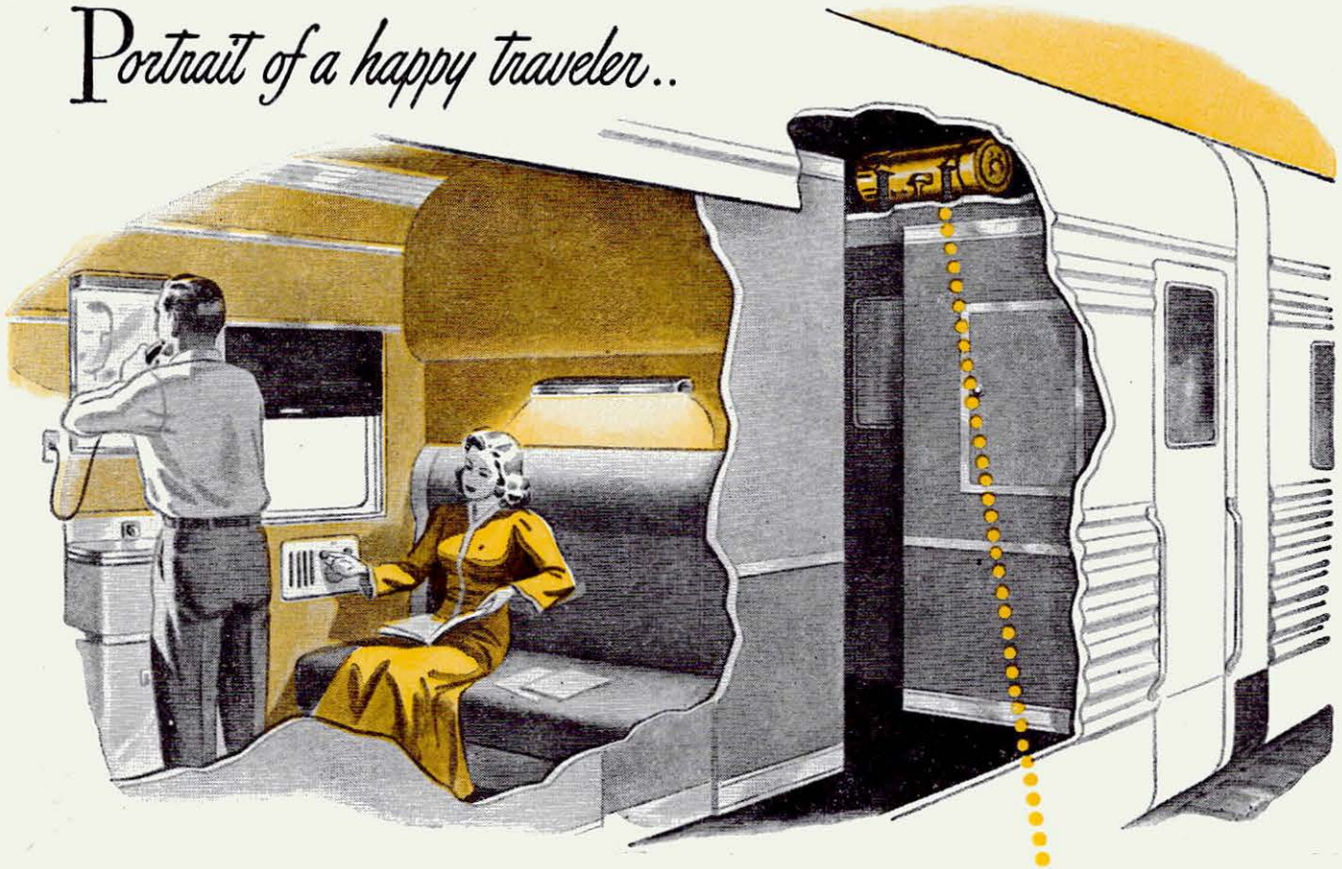
Pittsburgh STEEL FOUNDRY CORPORATION

Glassport, Pa. · Fort Pitt Steel Casting Div., McKeesport, Pa. · Pittsburgh Spring and Steel Co. Div., Pittsburgh, Pa.

Sales Offices: NEW YORK · PHILADELPHIA · CHICAGO · CLEVELAND · CINCINNATI · AKRON · WASHINGTON

W&D 9669

Portrait of a happy traveler..



ALL THE CONVENIENCES OF HOME . . . *on Rails*

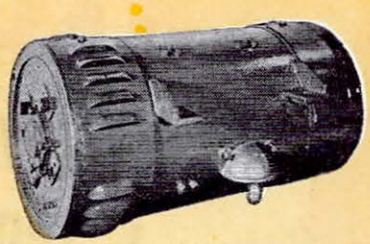
Give your passengers that "right at home" feeling. Provide *all* of the modern conveniences they expect. Install Westinghouse Motor Alternators . . . for the conversion of direct current to alternating current.

For economical operation of modern passenger car conveniences such as fluorescent lighting, water coolers, Precipitron, electric razors, radios and other electrical equipment . . . alternating current is practically a necessity.

The Westinghouse Motor Alternator is compact . . . providing power conversion in one package. Design and construction includes all basic features which have been time-tested and demonstrated as essential for highly satisfactory operation in railroad service.

Consult Westinghouse for more detailed information on modernization of passenger cars with efficient power conversion equipment.

Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa. J-95119



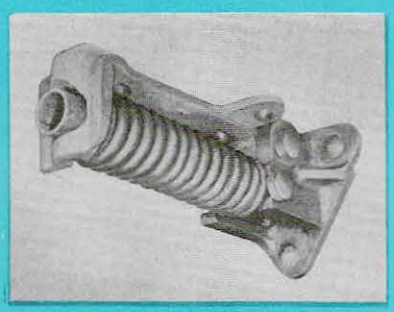
The Westinghouse Motor Alternator may be mounted under the car roof (as shown above), or on the car underframing. Its compactness provides for simple installation . . . *wherever* convenient.

MODERNIZE WITH **Westinghouse**

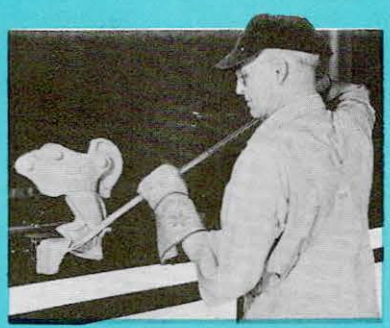
PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

A new combination!

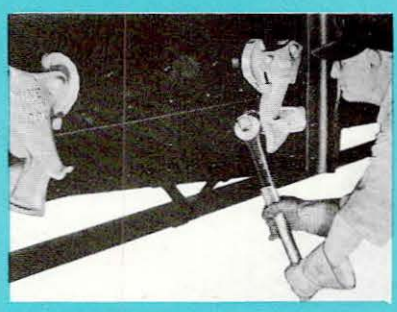
..to improve drop bottom door operation



A new hinge — designed to further economy and safety. Permits one man to close the heaviest drop doors.



A new pry-bar fulcrum at the point of operation to assure positive closure of distorted drop doors.



A new adjustable door beam extension to actuate uniform tightness and proper fit on every drop bottom door.

Specify

WINE

Spring Hinges *and* Master Locks

FOR EASIER AND FASTER OPERATION

One man ..does the work of Five!

..with the new

WINE

DROP END BALANCER

REDUCED OPERATING COSTS
ONE MAN CLOSING SAFE OPERATION

THE WINE RAILWAY APPLIANCE CO.

PHOTO COURTESY OF THE BETTMAN ARCHIVE

FROM A METAL MAKER'S "FAMILY ALBUM"

When Furnaces were charged like this...

"STANDARD" was producing 1500 tons of steel per year

Here is an ancestor of the skip-hoist, as it existed in 1873. Bearded workmen with bulging muscles took care of the furnace charging.

Standard Steel's "Emma" furnace had been built six years before, to supply the new Bessemer plant . . . the third to be installed in the United States. Local ores proved too high in phosphorous, however, and the furnace was sold. The plant then switched to the making of crucible steel, producing 1519 tons in 1873.

Today Standard's production capacity from its five open hearth furnaces totals 160,000 net tons. These furnaces permit complete control of the methods used in making and casting the steel—a highly important factor in producing quality forgings and castings.

"Standardize on Standard" is an excellent way to simplify your buying.

BLW THE BALDWIN GROUP **BALDWIN**

FORGINGS AND CASTINGS

The Baldwin Locomotive Works, Standard Steel Works Division, Burnham, Pa., U.S.A. Offices: Philadelphia, New York, Chicago, St. Louis, Washington, Boston, San Francisco, Cleveland, Detroit, Pittsburgh, Houston, Birmingham, Norfolk.

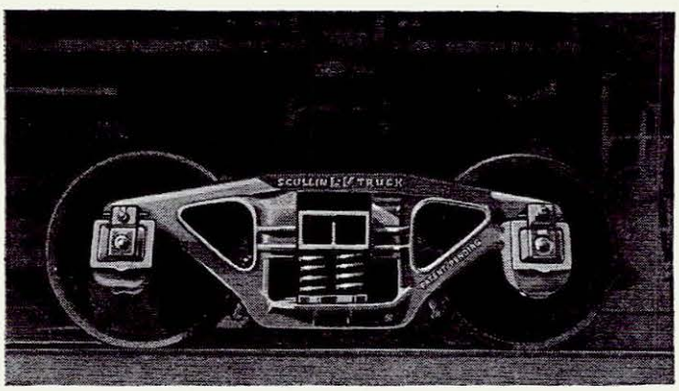
"STANDARDIZE ON STANDARD" FOR YOUR FORGINGS AND CASTINGS

FREIGHT CARS WITH "SLEEPER" SMOOTHNESS...

The New SCULLIN L-V TRUCK

LATERAL-VERTICAL CUSHIONED MOTION

TAKES THE "SWING AND SWAY" OUT OF YOUR FREIGHT



Designed to make higher speeds really *safe* for lading, cars and roadbed. Completely controls and cushions all lateral and vertical motion—necessary to provide ultimate riding qualities.

• Simple, trouble-free, easy to maintain • Eliminates lateral impacts • Maintains constant controlled truck alignment • Comparable to conventional freight car trucks in both price and weight • For complete details write:

ARMY NAVY

SCULLIN STEEL CO

SAINT LOUIS 10, MISSOURI

STEEL CASTING MANUFACTURERS SINCE 1899

NEW YORK • CHICAGO • PHILADELPHIA • CLEVELAND • ST. PAUL • BALTIMORE • RICHMOND, VA. • MEXICO CITY, D. F.

"Pacemaker"

fast freight cars require dependable door equipment

These ultra modern cars are equipped with

SUPERIOR

STEEL CAR DOORS

and

Ball Bearing Door Fixtures

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CAR DOOR
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•

McCORMICK BUILDING
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SUPERIOR CAR DOORS

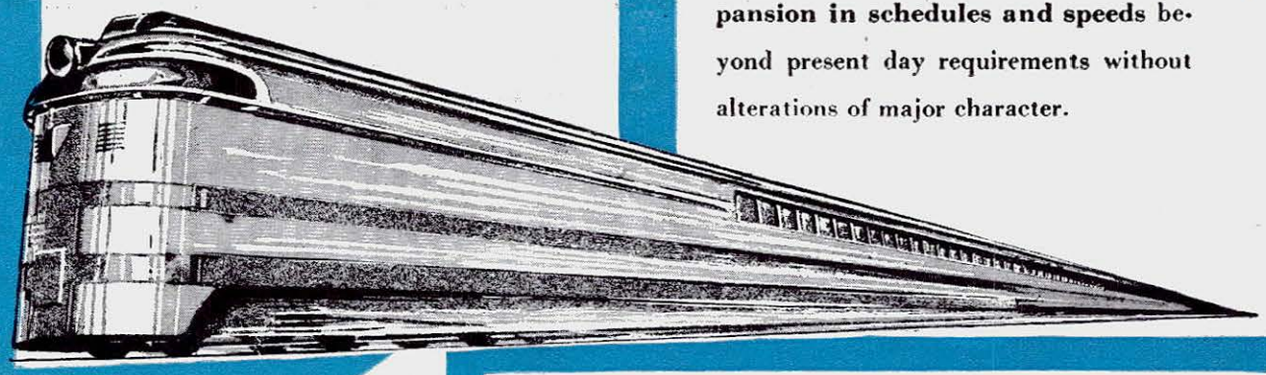
are lighter..tighter..*Superior*

"HSC" Electro—Pneumatic Brakes Provide for the Foreseeable Future

Some scientists believe atomic power can be used to run railroad locomotives. If so, what type of brake will be required to control this new form of energy with the same degree of precision, smoothness, and safety as present day brakes?

Speculative thinking, of course!

But the pattern in modern braking is clearly defined. Most of ordering railroads now specify "HSC" electro-pneumatic brakes for passenger cars. The complete schedule embraces the modern ultimate in safety and passenger comfort. It is the basis which permits **forseeable expansion in schedules and speeds** beyond present day requirements without alterations of major character.



For safety, speed, and passenger comfort specify the complete "HSC" schedule—

Electro-pneumatic—improves schedules with flexibility and smoothness

Speed Governor Control—for control of high braking forces

"AP" Decelostat—for anti-wheel sliding protection.

Westinghouse Air Brake Company

Wilmerding, Pa.

Railway Age

With which are incorporated the Railway Review, the Railway Gazette, and the Railway Age-Gazette. Name registered in U. S. Patent Office.

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The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service.

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BETTER CONTROL

of an Operating District

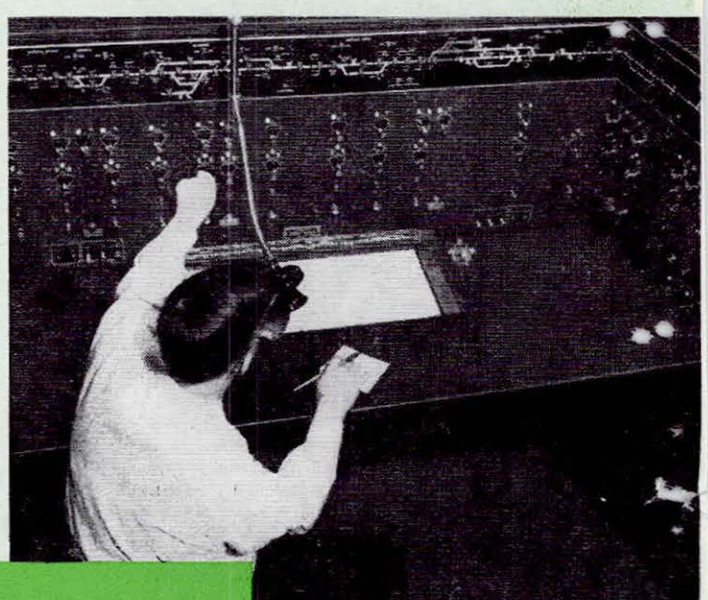
with "UNION" C.T.C.

WITH "Union" Centralized Traffic Control, trains passing "OS" points are instantly and visibly reported by the centrally located control machine. Clear or occupied sections of the main and passing tracks are clearly indicated on the control panel. It provides for instant control of all signals and switches at the entering points of all clear routes in the territory—opportunities for improved train performance are not wasted.

The illuminated track diagram, automatic train graph, and simple switch and signal levers on a *single* C.T.C. machine, centralize complete knowledge and control of the entire district in *one* office. That district is just bound to function as a more efficient unit!

Thus goods and passengers are delivered at destinations on schedule. Your railroad's competitive position is strengthened through improved schedules and "on time" performance. And the savings in operating costs are still another advantage because "Union" Centralized Traffic Control saves you far more than it costs.

Our representatives will gladly tell you more about Centralized Traffic Control. Write, or call, your nearest "Union" district office.



UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PENNSYLVANIA

NEW YORK · CHICAGO · ST. LOUIS · SAN FRANCISCO

"UNION" C TC TRAIN OPERATION BY SIGNAL INDICATION

Saves You More Than It Costs!

The Week at a Glance

CONVENTIONS AGAIN: Bringing the war-compelled hiatus to an end, the A. A. R. Mechanical Division and Purchases and Stores Division next week are gathering in regular annual convention in Chicago, but without the accompanying exhibits characteristic of pre-war gatherings. The programs of the meetings appear in this issue. As usual, the backbones of these sessions are the committee reports that summarize the results of the labors and experiences and studies of the practical railroad men that compose those committees, but they are supplemented by papers and discussions featuring other men equally practical, equally concerned with the industry's problems and its opportunities, but approaching them perhaps from different angles and with different solutions.

●

INNOVATION: For many years railroad passengers have been urged by every means at the carriers' command to buy tickets before boarding trains. Now the C. & O. is planning to encourage passengers — only on the new Detroit - Grand Rapids all-reserved seat streamlined "Pere Marquette," however—to board the train first, then buy the ticket. Seats will be assigned by name to the customer who phones for reservations. He will by-pass the line at the ticket window and get right on his train, where a passenger representative will have his ticket and seat ready for him. (More details appear in the news pages.)

●

THE "NEW" ECONOMICS: As a perfect example of the utter lack of bedrock practicability that characterizes so much of the planning and predicting in which "economists" on the government payroll have such overweening faith we cite the pronouncement of an O. P. A. "expert," in the course of the rate hearings now going on in Chicago (a report of which appears in the news pages of this issue), to the effect that the railroads are all built, and therefore need no more new capital. Proceeding from this premise, it was proposed, apparently in all seriousness, that rates ought to be fixed so that railroads would earn a rate of return insufficient to cover their current capital costs.

●

PRECEDENTS OUTMODED: There is good ground for believing that many preachers of the pernicious economic dogma now prevailing in Washington know perfectly well that the only possible result of such theories, if put into practice, would be the complete collapse of the system of private enterprise, based on profit, and the substitution for it, in this country, of some form of government-managed economy. Whether all of their followers share the complaisance with which some, at least, of these "new" economists view this prospect is not so clear. In the light of the Interstate Commerce Commission's traditions and precedents, developed in the execution of its statutory duty to foster the national transportation system, including the railroads, that government agency cannot consistently subscribe to an economic theory based on the premise that it is a cardinal sin to make a profit. The leading editorial points out, however, that a majority of the commission, in its present treatment of the railroads, is showing less faith in those traditions and precedents than in the typical New Deal policies inspired by the proponents of totalitarianism, despite the protests of its more orthodox minority.

●

TALENT WELCOMED: Not so much has been said about it recently, but the opinion probably still prevails in certain obstinately uninformed quarters that the railroad industry is dead set against changing its ways to take advantage of new techniques and new materials. An editorial this week points out how the railroads and the builders of their equipment have been going far afield to find engineers who can contribute to the industry's equipment research activities the talents and experience and viewpoints they have developed in other lines of endeavor, complementing the contributions of the specialists in railroad practices and methods.

●

FEW NEW FREIGHT CARS: Carloading totals, week by week, are now, in dog days, at record-breaking levels. What they would be in October, if there were only enough cars, is something to think about. But there are not enough cars. The shippers know it, the O. D. T. knows it, and the railroads know it, and all of them have been striving to use the available cars as intensively as they can be used under prevailing conditions. The obvious remedy for what is already a serious car shortage, and one that threatens to approach disastrous proportions before the year is out, is new cars. O. D. T. Director Johnson says the railroads could use 200,000 right now—if they could be had. As is reported in our news columns, government financing of orders for 50,000 cars has been under discussion in Washington in the past few days. This expedient may appeal to an administration more notorious for wrestling with consequences than noteworthy for attacking causes. The railroads' failure to secure any great number of new cars this year, however, is a direct result of the presently prevailing political philosophy, which has encouraged strikes that have retarded production and made materials scarce, has boosted costs with terrific wage increases, and has slashed the railroads' earning power to the vanishing point. An article on page 174 sums up the railroad equipment situation as it appears today—and finds it disturbing.

●

BAY BRIDGE: Main-line New York Central trains between Cleveland and Chicago now cross Sandusky bay, an arm of Lake Erie, on rock fills and heavy steel and concrete ballasted-deck bridges. The methods adopted to construct these bridges without delaying heavy war-time traffic are the subject of an illustrated feature article this week. They replace earlier, less substantial timber trestles that, with replacements and modifications, had been in existence almost a century.

IN UNIONS IS STRENGTH: The news pages this week report the success of the railway brotherhoods in getting their plan for more "social security"—the Crosser bill—enacted into law substantially as they dictated it to Congress. Also reported is the apparent failure of the Bulwinkle bill, which would have exempted railroad joint action in rate making, under I. C. C. supervision, from anti-trust persecution, even though its passage was urged not only by the railroads but also by an imposing aggregation of shippers and independent organizations. The Bulwinkle bill, said Senate Leader Barkley, is "controversial." The implication, obviously, is that *everybody* favored the Crosser bill, which will add a mere $100 million or so to the railroads' annual costs.

●

BUYING POWER: In April, before the railroads were hit in the head with a wage increase of staggering proportions, they spent almost $118 million for fuel, materials and supplies, and in the first four months of this year they spent for such necessities almost $500 million. Details appear in an article on page 164. The disastrous effect on the national economy of any substantial diminution of these railway purchases can readily be imagined, yet it would seem that the government agencies that control the prices railroads must pay, the tax bills they must meet, and the rates they may charge, are determined that the railroads must—for lack of means—curtail such expenditures to the utmost.

●

PROLONGING TIE LIFE: It used to be true that crossties had to be replaced every few years because decay made them unserviceable. Modern methods of preservative treatment have licked this problem, and most tie replacements now are made necessary, not by decay, but by mechanical wear. An editorial herein comments on the need for the development of measures to protect ties from mechanical damage, both so the railroads can get the full benefit of the investment they are making in preservative treatments and so they can curtail renewals of higher-priced ties with higher-priced labor.

●

SERIOUS CHARGES: Robert R. Young, chairman of the Chesapeake & Ohio, has just given wide distribution to a statement (largely reproduced in this issue) in which he renews and amplifies his charges that American railroads are dominated by Wall Street banking firms and large insurance companies. Such control allegedly is maintained through representation on the boards of directors of solvent railroads and through voting trusts set up under Section 77 reorganizations, even though, Mr. Young contends, interlocking directorates and common control of two or more carriers (except with Interstate Commerce Commission approval) are specifically forbidden by law. The commission is assigned a large share of the blame for this state of affairs in the C. & O. chairman's vigorous statement.

1946 PARADE OF THE VETERANS

Hats Off To The Veteran "Yard Goat" Of The Santa Fe!

THE first locomotive that was entirely built at the Electro-Motive plant in La Grange was ten years old in May of this year.

It was a switcher delivered to the Santa Fe, and designated No. 2150.

During the past ten years this locomotive has accumulated an availability of more than 92%. It has covered more than 431,000 miles of yard service, averaging 584 hours per month.

No. 2150 is indeed a veteran—a forerunner of the more than 2,300 General Motors Diesel passenger, freight and switcher units that followed. And it is still rolling up performance records with no sign of a letdown.

In fact, a General Motors locomotive is very apt to improve with age. Being built to standardized specifications, replacements can often be made with an improved part that does the job even more efficiently than the original.

Hats off to the veteran yard goat of the Santa Fe!

YOUTHFUL IN STAYING POWER

GENERAL MOTORS LOCOMOTIVES

VETERANS FOR PERFORMANCE

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS

LA GRANGE, ILL.

RAILWAY AGE

The Railroads' O. P. A.

The O. P. A. is back again, but with attenuated powers, to plague private enterprise and deny it the incentives necessary to full production and complete rehabilitation. The action of Congress in restoring this discredited and bumbling agency to life gives the railroads the cold comfort of companionship in their misery —because the Interstate Commerce Commission, as at present constituted, has been treating the railroads just the way the O. P. A. has been treating other business. That is, the Commission is making the railroads pay for the May wage increase award largely by diminishing the earnings applicable to capital, and, so far, has permitted the passing along of only a fraction of increased costs to the purchasers of railroad service. Railroad freight rates are only 6 per cent more than they were in 1941, while commodity prices have risen 27 per cent and railway wages have increased 50 per cent.

Hope, but Not Assurance

Additional hearings, to be sure, are now being conducted by the I. C. C., holding out hope to the railroads, but by no means the assurance, that toward the end of the current year further rate increases may be authorized. Meantime, however, most of the increased wages the railroads are forced to pay were retroactive to the first of the year—so the very best that the railroads can expect is that they *may* get compensatory increases in rates some three-quarters of a year or so after the incurrence of increased costs.

Just as a slight measure of the deterioration which has occurred in the concern of the Interstate Commerce Commission for the "fostering guardianship" which it is charged by law to exercise in the public interest over the economic welfare of the nation's transportation system, it may be recalled that when a wage increase *much smaller* than the recent one was awarded to railroad employees at the end of 1941 it took the Commission less than three months to authorize compensatory rate increases to the railroads. Now, with a financial disadvantage to the railroads of much larger size, the regulators are taking their own sweet time. The O. P. A. spirit seems to be infectious. Until recently the I. C. C. had held itself aloof from the spirit of shallow irresponsibility toward grave affairs which has characterized most of the New Deal agencies from the outset.

Nobody with any knowledge of the railroad industry and its constant needs for additional capital believes that the industry can get along with less than $1 billion a year of net earnings (i. e., earnings after taxes but before interest). In the face of this general understanding, however, the Interstate Commerce Commission's own statisticians have recently estimated that such earnings by the railroads in 1946 are going to total only about $600,000,000, with present wages and present rates.

In the last year before the war, 1941, the railroads earned net railway operating income (i. e., net after all taxes but before interest) of almost exactly $1 billion. Wages were increased in December, 1941, and the railroads immediately applied for compensatory increases in rates.

In authorizing the Ex Parte 148 increases early in 1942 (afterwards suspended and only recently reinstated), the Interstate Commerce Commission said of the $1 billion of net railway operating income earned in 1941 that it "cannot be considered too high for a prosperous year following a long period of lean years." In the years 1921-1930 net railway operating income *averaged* almost $1 billion annually, with the Commission at no time indicating that it believed such net earnings to be excessive.

In 1946 the investment of the railroads in road and equipment, and the volume of traffic they are handling, are much greater than in 1941 and than the average for the years 1921-1930. The railroads' investment in road and equipment was $25.5 billion in 1941, and it averaged $22.7 billion in the years 1921-1930. In 1946 the investment is in the neighborhood of $27 billion, or 6 per cent greater than in 1941 and 19 per cent greater than the 1921-1930 average.

Beguiled by New Deal Chimeras

Since an average of $1 billion of net railway operating income was not considered an unreasonable return in the '20's on an average investment of $22.7 billion (that is, a rate of return of 4.4 per cent); and, in 1941, was not considered excessive on an investment of $25.5 billion (i. e., a return of 3.9 per cent)—how can the Commission in any consistency whatever condemn the railroads, as it has by its own figures, to net earnings of only $600 million in 1946? The answer is, of course, that the Commission cannot *consistently* hold the railroads to such paltry earnings. By doing so it does not follow its own traditions and precedents, but the newer precedents and traditions inaugurated by O. P. A. and other New Deal agencies, whose purpose, seldom more than faintly camouflaged, is to wreck private enterprise

by taking all the profit out of it so that nobody but the government can afford to operate it.

There are several members of the Interstate Commerce Commission who, plainly, do not want to see that body follow the irresponsible direction in which the now-dominant members are forcing it—but they do not seem to wield much influence on their fellows.

Modernity of Sleeping Cars

Elsewhere in this issue there appears an advertisement by the Chesapeake & Ohio Lines in which the quality of sleeping car service now provided on the American railroads is severely criticized, and in which other railroads, individually or collectively, are invited to join with the C. & O. in quickly acquiring sufficient new sleeping cars to banish from service forthwith all open-section sleepers—which are called "rolling tenements" in the advertisement.

There is a great deal to be said for what appears to be the primary objective of this advertisement, namely, calling on the railroads for supreme effort to bring the quality of sleeping-car service generally up to the standard now prevailing on principal routes. We should question, however, the characterization of open-section sleepers as "rolling tenements," except for the plain intent of the advertisement to use this term, not as accurately descriptive, but as a humorous exaggeration. We also question the suggestion, implicit in the advertisement, that the railroads generally are backward in their orders for new passenger equipment. The fact is that some 2,000 passenger cars were on order in June, while deliveries amounted only to the merest trickle. If the railroads should greatly increase their orders for sleeping cars, the availability of materials and manufacturing capacity would still govern the rate at which service can be completely modernized. It is not the magnitude of car orders but the scarcity of materials which is the limiting factor in the improvement of passenger service.

In short, we believe the C. & O.'s initiative in inviting attention to the great desirability of rapid improvement in passenger service is constructive and that the message may be read with profit by all railroad men, especially for the emphasis which is laid on the economy of placing orders in quantity instead of in a multitude of small orders of varying designs. The impression conveyed by the advertisement that the railroad industry generally has been deficient in zeal in the improvement of its passenger service cannot misinform those who know about the magnitude of passenger car orders in relation to the builders' capacity to produce this equipment under present conditions in the materials market—and every reader of the *Railway Age* falls into this category. To such an audience the advertisement cannot be misleading, while it is certain to prove stimulating and provocative of discussion.

A Competitor's Comment

"One of the principal reasons for the success of air transportation has been the desire and willingness of the people in air transportation to accord the passenger the dignity of an *individual*.

"On the other hand, our success in attracting patrons from other forms of transportation, and to air transportation, has been the willingness of other forms of transportation to regard their passengers as a 'mass' or 'volume' of people."

—Ralph Damon, president of American Airlines

[In corroboration of this observation a prominent executive of the railroad equipment industry relates that, the other day, he phoned an airline for a reservation and was told that the flight the manufacturer wanted to ride was sold out. "Hold the wire, though," said the reservation clerk, "and we'll get the space for you from (naming a competing airline)." The manufacturer reports that he never had a similar experience with a railroad—acquiring space for him on a train of a competing railroad.]

Significant Trends in Equipment Design

American railroads have been devoting increased attention to research since the inauguration, four years ago, of the comprehensive program under the leadership of Judge R. V. Fletcher, of the Association of American Railroads. This has been reflected in mechanical department activities and doubtless accounts in some degree for a development which may result in radical improvements in locomotive and car design.

A number of war industries, even as far back as two years ago, began to study the railroad equipment field as one which might offer possibilities for them in the post-war period. They knew practically nothing about railroads but they had mastered gigantic problems in the production of vast quantities of war equipment and supplies. They reasoned that they could readily adapt their engineering staffs and facilities to the manufacture of peace-time products, and spent much time and effort in studying railroad equipment.

This interest means bringing to the business of equipment design and manufacture the benefit of attention from more minds. An even more noteworthy occurrence in the same direction has been the appointment to key positions in the railroad and railway supply industry of engineers and researchers who have achieved distinction in other fields. They come to their new work with special abilities and open minds. Three names immediately occur as representative of this group—all of them interested in improving locomotive or car equipment. Kenneth A. Browne, for instance, more than a year and a half ago was appointed research consultant in the president's office of the Chesapeake & Ohio and related lines. He came to that position with a record of accomplishment as a research engineer and consultant in the aeronautic field and particularly in relation to engine development. The C. & O., with other coal-carrying railroads and bituminous coal interests, is deeply concerned in developing locomotives which will continue to use that fuel, and it is understood that Mr. Browne has given much time to that project.

Another expert in the field of steam generation and utilization, and without railroad background or experience, Dr. John Y. Yellott, is directing a program sponsored by Bituminous Coal Research, Inc., which is sup-

"A Valuable Opportunity"

Utilization of engineering improvements in locomotives and of presently available lighter-weight freight cars may be necessary as an offset to the rails' higher operating costs. Although the Diesel-steam controversy still continues and will probably never be settled on the basis of operating costs alone, advanced types of both locomotives have evolved from war-time research and promise higher speeds and smoother operation for both passenger and freight runs. Light weight, high-strength-steel freight cars, weighing approximately five tons less than cars of customary size, have been in satisfactory service for the past decade.

The potential of combined domestic and foreign demand during these immediate post-war years will probably result in a volume of railroad equipment production approaching that of the early 1920's. Insofar as the general level of business activity and the railroads' financial condition will permit, a valuable opportunity is present to rehabilitate equipment, roadways, and communication systems, thereby improving both their service and competitive position and effecting some measure of reduction in operating costs. However, the cyclical history of the industry, as evidenced by the fluctuation in orders over the past two decades, may again be experienced by equipment manufacturers after the post-war buying has been completed.

—*The Northern Trust Company's Business Comment.*

ported by the railroads and bituminous mining companies. Its purpose is to increase the efficiency of steam locomotives through the use of powdered coal, the development of turbines and the application of newer steam power principles. The efforts of these two men have progressed to such a point that concrete results are anticipated in the near future.

Another similar instance, related this time to freight car equipment, is the recent appointment of Palmer Cosslett Putnam as consulting engineer to the American Railway Car Institute. Mr. Putnam served as assistant to Dr. Vannevar Bush, director of the Office of Scientific Research and Development during the war. He directed the design and development of the amphibian craft known as the "Duck," as well as the "Weasel" and other war equipment. The announcement of his appointment suggested that "an individual from outside the industry might have fewer inhibitions" than one inside. He was selected as a development engineer with an outstanding record for imagination and ability to conceive and execute practical solutions of difficult problems. His assignment is to make, in cooperation with the railroads, a comprehensive exploration covering, among other things, new materials and techniques developed during the war to ascertain possible applications for improving rail freight equipment.

Competent men of this category, admittedly, know very little about railroad transportation. The expectation is that they will bring new ideas which may be applied successfully to locomotive and car design and construction. Their efforts must, of course, be integrated with those of people who are thoroughly experienced with railroad operations and the peculiar requirements and limitations of such service. The aim is not to supplant railroad-trained minds but to supplement them. The outcome will be awaited with keen interest.

Crosstie Economics

No one would consider it good business to incur the expense of a structure to endure 25 to 30 years if it were known that weaknesses were present that might require its replacement many years short of its potential service life. This is, however, just what is done on most roads with respect to crossties and switch timbers.

There was a time when decay was the primary factor limiting the service life of ties. Before effective wood preservative measures had been devised, crossties frequently had to be taken out of track because of decay after only four or five years' service. But the development of modern methods of timber preservation, and their almost universal application to the treatment of ties, has changed the picture entirely. If decay were the only factor involved, the railroads would now be able to keep ties in track as long as 25 to 30 years.

Unfortunately, ties are subject to other forms of damage against which the development of protective measures has not kept pace with the progress made in preventing decay. Among these enemies of the crosstie are tie-plate cutting, spike killing, crushing, shattering, and tamp killing. These forms of damage, known as mechanical wear, have become more pronounced as train loads and speeds have increased, and strenuous efforts have been made and are being made to develop means of protection against them. In many quarters the opinion prevails that the solution lies primarily in the use of larger tie plates of more efficient design, securely fastened to the ties by lag spikes. To date, however, it cannot be said that, except on a few railroads, much progress has been made in solving the problem.

A conception of the inroads made on tie life by mechanical damage is given by the experience of a large middle-western road. Of the total number of creosoted pine, gum and oak ties removed from tie test tracks on this road from 1927 to 1943, inclusive, 58.5 per cent failed from mechanical damage *with no important sign of decay*. Only 16.7 per cent of the tie renewals in these tracks during this period were required primarily because of decay. Since the crosstie practices of this railroad are generally representative of other large systems, it may be assumed that these figures on renewals are also representative.

Thus it is that, while the railroads habitually make a substantial investment in each tie to protect it from decay, there is more than a good possibility that the tie will have to be removed from service many years before the maximum return on this investment has been realized. Such a situation means simply that the primary problem now is to develop and put into effect such measures of protection against mechanical damage as will permit ties to remain in track for a period more nearly approaching their potential life from the standpoint of decay.

This problem is now being studied by the railroads individually and collectively. Meantime, the destruction of ties through mechanical wear is progressing rapidly, while at the same time the cost of ties, including the labor to install them, has been increasing. In the interest of economical track maintenance, the need for a solution to the problem is urgent, justifying the railroads in pursuing their present studies relentlessly and, if possible, intensifying them.

R. G. Henley,
Chairman

V. R. Hawthorne,
Executive Vice-Chairman

Clark Hungerford, Vice-President, Operations and Maintenance Department, Association of American Railroads

W. J. Patterson, Member, Interstate Commerce Commission

L. L. White, Vice-President, Chicago & North Western

Mechanical Division Meeting

First full meeting of the Association of American Railroads, Mechanical Division, since 1941, to be held at Congress Hotel, Chicago, August 8 and 9

FOR the first time since before the war —1941 to be exact—the Association of American Railroads, Mechanical Division, is holding a full meeting (without exhibit) on Thursday and Friday, August 8 and 9, at the Congress Hotel, Chicago. In addition to the reports of the technical committees which have formed an important part of the Mechanical Division session for many past years there will be addresses by L. L. White, vice-president, Chicago & North Western; W. J. Patterson, member of the Interstate Commerce Commission; Clark Hungerford, vice-president, Association of American Railroads, and R. G. Henley, chairman of the Mechanical Division.

In addition to the reports which customarily are found on the regular program there are, this year, two reports of a special nature—one on developments in journal bearings and the other on geared hand brakes. The complete program is shown below.

PROGRAM

Thursday, August 8, 10 a.m.

Address by L. L. White, vice-president, Chicago & North Western

Address by W. J. Patterson, member of the Interstate Commerce Commission

Address by Clark Hungerford, vice-president, Operations and Maintenance Department, A. A. R.

Address by R. G. Henley (chairman, Mechanical Div.), general superintendent motive power, Norfolk & Western

Discussion of reports:

Committee on Brakes and Brake Equipment

Committee on Couplers and Draft Gears

Committee on Locomotive Construction

Committee on Lubrication of Cars and Locomotives

Committee on Journal Bearing Development

Friday, August 9, 9 a.m.

Discussion of reports:

Arbitration Committee

Committee on Prices for Labor and Materials

Committee on Geared Hand Brakes

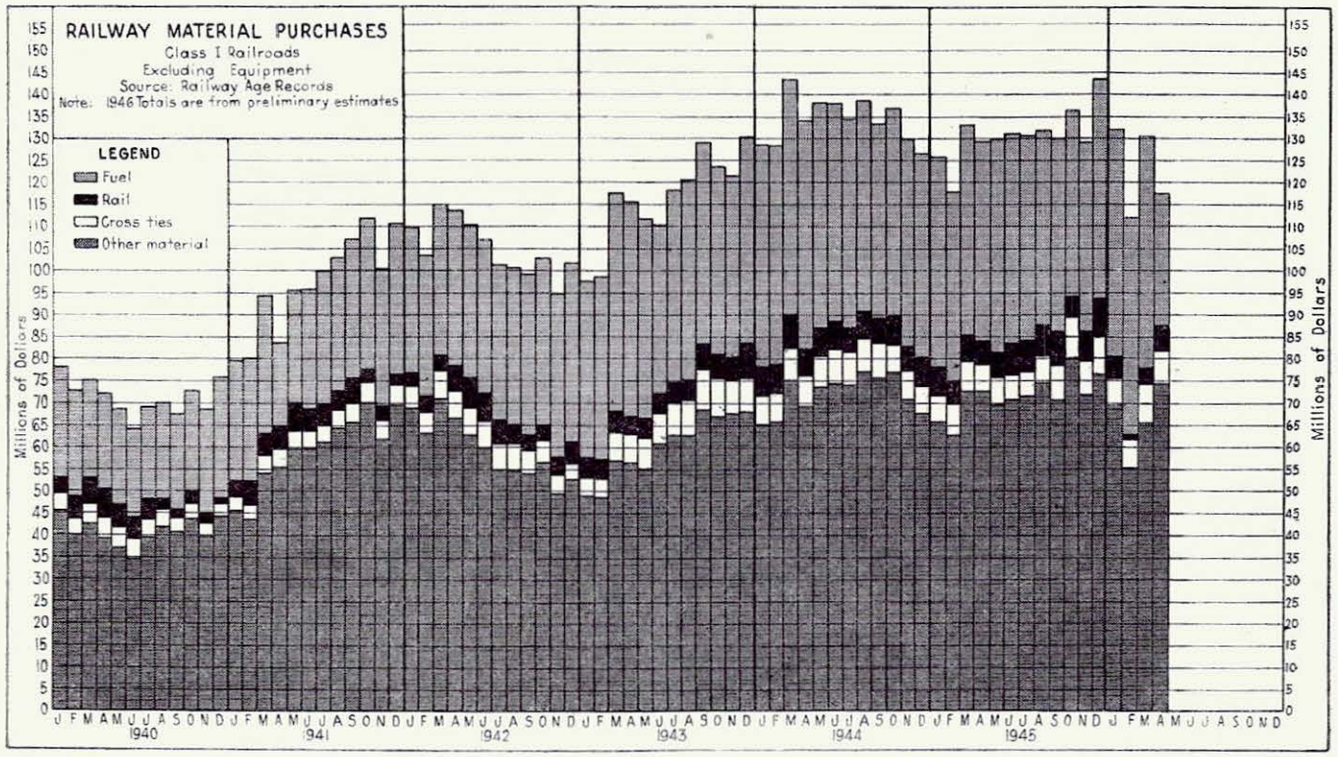
Committee on Tank Cars

Committee on Loading Rules

Committee on Wheels

Committee on Specifications for Materials

Committee on Car Construction



Purchases Well Above Pre-War Levels

Class I roads spent $117,812,000 in April for materials, supplies and fuel—Expenditures for rail, $5,814,000, were greater than for any previous month during 1946—Crossties also show promising gain

CLASS I railway purchases of materials, supplies and fuel, excluding equipment, during April, amounted to $117,812,000 and totaled $492,772,000 for the first four months of 1946, according to estimates prepared by *Railway Age*, and based upon special reports from 75 individual carriers. The April amount was 11 per cent less than the $132,107,000 expended for similar materials, supplies and fuel during January; however, it exceeds February purchases in the same category by 5 per cent, but sags 10 per cent below March purchases, which totaled $130,681,000. April purchases were 9 per cent less than the $129,738,000 spent for similar purchases during the same month last year, 12 per cent below the April, 1944, total, but are 2 per cent greater than purchases in the same category during the corresponding month of 1943, top 1942 by 4 per cent, and are 41 per cent greater than the $83,742,000 spent for similar materials, supplies and fuel during the comparable month of 1941.

Although April purchases reflected a drop below the January and March totals, they are nevertheless marked by substantial increases in the receipt of rail, crossties and miscellaneous materials. Rail purchases during April are 628 per cent above the seven-year low registered during February, and crossties purchased during April amounted to $7,654,000, reflecting a gain of 26 per cent over the $6,084,000 spent for them during February.

Total purchases for the first four months of this year slipped 3 per cent below last year's $506,923,000, and were 8 per cent less than the $534,611,000 expended for the same purpose during the similar period of 1944, but they exceed those for the same four months of 1943 by 15 per cent, are 11 per cent more than similar purchases in 1942 and 46 per cent greater than the $337,637,000 expended for similar materials, supplies and fuel during the first four months of 1941.

Excluding fuel, and considering only the purchase of materials and supplies from manufacturers, railway purchases of these items during April aggregated $87,996,000, 9 per cent more than the January, 1946, purchases in the same category; they are 41 per cent greater than the $62,470,000 spent for similar material during February and 13 per cent more than the $77,902,000 expended for the same materials and supplies during March. They are about 5 per cent more than similar purchases during the corresponding month last year, and 7 per cent, 31 per cent, 12 per cent and 36 per cent more, respectively, than purchases in the same category during the comparable month of 1944, 1943, 1942 and 1941.

Purchases of manufactured materials and supplies for the first four months of 1946 totaled $308,792,000, dipping 4 per cent below those of the same period last year, 6 per cent less than the total for the first four months of 1944, but topping the $250,453,000 expended for the same purpose during the similar period of 1943 by 23 per cent; they approximate 1942 purchases for the same four months and exceed those for the same period of pre-war 1941 by 33 per cent.

A new 1946 peak was established in the monthly purchases of the thousands of items of miscellaneous materials and

Railway Purchases January, February, March and April—1941-1946—Class I Roads

	Miscellaneous Materials and Supplies—In Thousands						Rails—In Thousands					
	1946*	1945	1944	1943	1942	1941	1946*	1945	1944	1943	1942	1941
January	$69,808	$66,609	$64,987	$49,000	$68,988	$45,387	$4,830	$5,734	$6,423	$4,811	$3,071	$3,459
February	55,587	63,245	65,693	48,407	63,148	43,400	799	5,962	6,264	4,340	3,813	5,289
March	65,988	72,791	75,033	56,911	71,103	53,988	3,510	6,531	7,700	4,718	3,766	5,160
April	74,528	72,869	69,337	56,412	66,409	55,377	5,814	5,621	6,175	4,181	5,827	4,850
	$265,911	$275,514	$275,050	$210,730	$269,648	$198,152	$14,953	$23,848	$26,562	$18,050	$16,477	$18,758
	Crossties—In Thousands						Total Materials and Supplies (Less Fuel)—In Thousands					
January	$5,786	$5,601	$6,895	$4,037	$4,871	$3,434	$80,424	$77,944	$78,305	$57,848	$76,930	$52,280
February	6,084	5,459	6,675	4,530	4,814	3,475	62,470	74,666	78,632	57,277	71,775	52,164
March	8,404	5,540	7,376	6,481	6,100	4,042	77,902	84,862	90,103	68,110	80,969	63,190
April	7,654	5,647	6,745	6,625	6,143	4,317	87,996	84,137	82,257	67,218	78,379	64,544
	$27,928	$22,247	$27,685	$21,673	$21,928	$15,268	$308,792	$321,609	$329,297	$250,453	$308,053	$232,178
	Fuel—In Thousands						Total Materials, Supplies & Fuel—In Thousands					
January	$51,683	$47,826	$50,341	$39,883	$32,851	$27,254	$132,107	$125,770	$128,646	$97,731	$109,781	$79,534
February	49,702	43,349	50,041	41,542	31,991	27,894	112,172	118,015	128,673	98,819	103,766	80,058
March	52,779	48,538	53,277	49,297	34,025	31,113	130,681	133,400	143,380	117,407	114,994	94,303
April	29,816	45,601	51,655	48,369	35,230	19,198	117,812	129,738	133,912	115,587	113,609	83,742
	$183,980	$185,314	$205,314	$179,091	$134,097	$105,459	$492,772	$506,923	$534,611	$429,544	$442,150	$337,637

* Subject to Revision.

supplies required for the maintenance of equipment, structures and track, which for the most part comprise storehouse stocks, when the April total reached $74,528,000. This is 7 per cent more than the $69,808,000 spent for this same material during January, exceeds the February purchases in the same category by 34 per cent and is 13 per cent greater than the $65,988,000 expended for similar materials and supplies during March, is 2 per cent greater than purchases in the same category during April last year, tops the April, 1944, total by 7 per cent, is 32 per cent greater than the $56,412,000 spent for similar material in the same month of 1943, 12 per cent more than 1942 and tops the $55,377,000 spent for the same purpose during the fourth month of 1941 by 35 per cent.

Class I railroads spent $265,911,000 for miscellaneous materials and supplies during the first four months of 1946, a drop of approximately 4 per cent below the same period of 1944 and 1945; however, it tops the $210,730,000 spent for similar materials and supplies during the same four months of 1943 by 26 per cent, but is 1 per cent less than expenditures in the same category during the same period of 1942 and is 34 per cent greater than the $198,152,000 spent for similar materials and supplies during the same four month period of 1941.

Expenditures for rail during April were greater than for any other month so far this year and amounted to $5,814,000. This was 20 per cent greater than for the month of January, tops the $799,000 rail expenditure during February by 628 per cent and is 66 per cent greater than March rail purchases, which totaled $3,510,000. April, 1946, rail purchases also top those for the same month last year by 3 per cent, but sagged 6 per cent below April, 1944, rail purchases, are 39 per cent more than the $4,181,000 expended for rail during the same month of 1943; they approximate similar purchases for the fourth month of 1942 and are 20 per cent greater than the $4,850,000 spent for the same material during April, 1941.

During the first four months of this year the railways spent $14,953,000 for rail, or 37 per cent less than the $23,848,000 spent for the same purpose during the same four months last year, 44 per cent, 17 per cent, 9 per cent and 20 per cent less, respectively, than for the first four months of 1944, 1943, 1942 and 1941.

Expenditures for fuel during April aggregated $29,816,000, the lowest level reached since April, 1941. April purchases are 42 per cent less than January, 40 per cent under the $49,702,000 spent during February and 44 per cent less than the March, 1946, fuel purchases.

Fuel purchases during April sagged 35 per cent below the April, 1945, total, 42 per cent below similar purchases during the same month of 1944, 38 per cent less than the $48,369,000 spent for fuel during the same month of 1943, and 15 per cent below fuel purchases during the same month of 1942, but top the $19,198,000 spent for similar material during April, 1941, by 55 per cent.

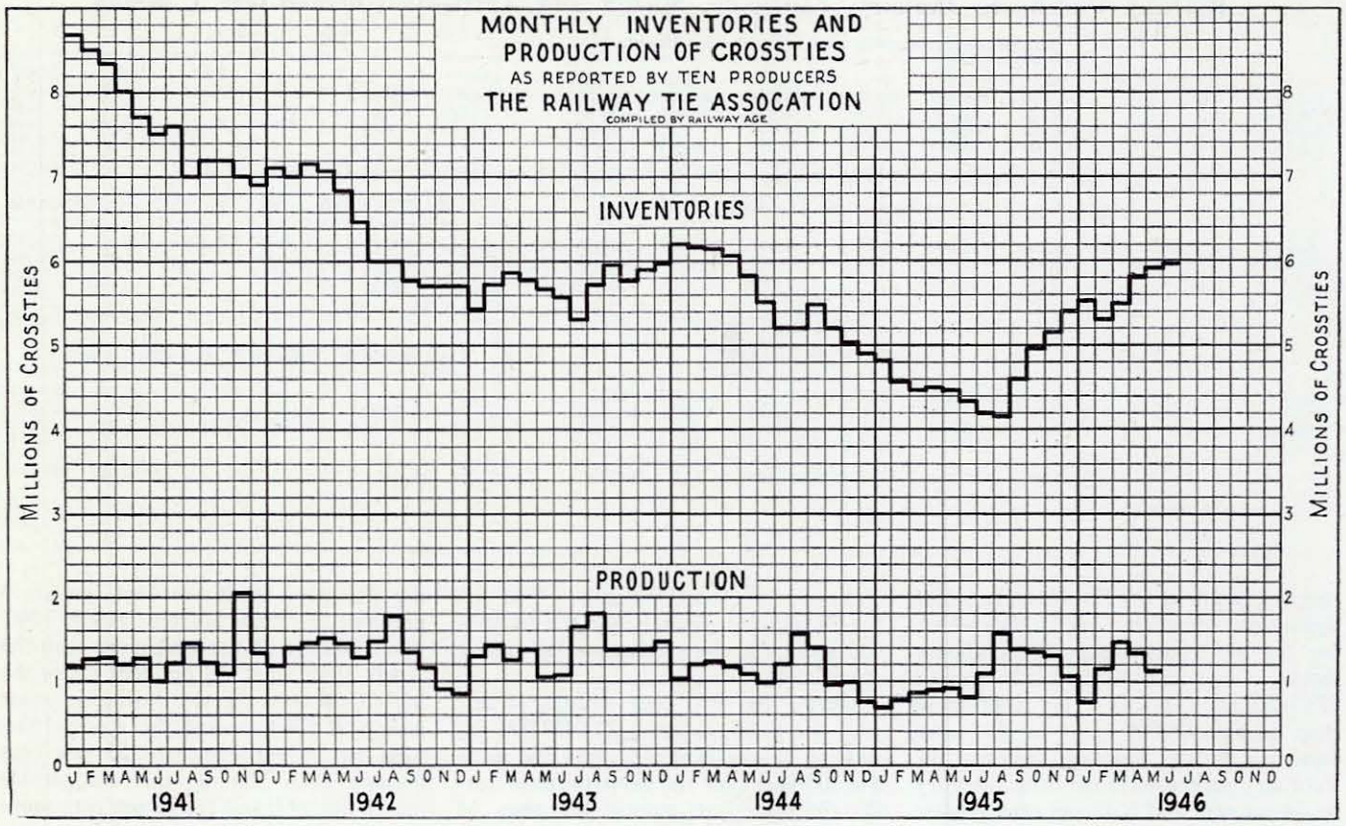
Fuel purchases for the first four months of 1946 amounted to $183,980,000, a drop of approximately 1 per cent compared with the $185,314,000 expended for fuel during the same four months of 1945, and 10 per cent less than spent for the same purpose during the comparable period of 1944, but exceed the $179,091,000 expended for fuel during the same four months of 1943 by 3 per cent, top fuel purchases during the corresponding period of 1942 by 37 per cent and are fully 74 per cent greater than the $105,459,000 spent for the same purpose during the similar period of 1941.

Crosstie purchases during April amounted to $7,654,000, or 32 per cent more than the January total; they top the $6,084,000 crosstie expenditure during February by 26 per cent, but are 9 per cent less than March. April, 1946, purchases are 36 per cent more than the April, 1945, total, 13 per cent above the $6,745,000 spent for ties during the same month of 1944, exceed the April, 1943, total by 15 per cent, are 25 per cent greater than during the comparable month of 1942, and are 77 per cent more than the $4,317,000 expended for crossties during April, 1941.

Class I roads spent $27,928,000 for ties during the first four months of 1946, which is a gain of 25 per cent over the $22,247,000 spent for similar material during the comparable period of 1945, tops purchases in the same category during the same four months of 1944 by approximately 1 per cent, exceeds the 1943 total during the comparable period by 29 per cent, is 27 per cent greater than the $21,928,000 spent for similar material during the same four months of 1942 and tops 1941 crosstie purchases for the same period by 83 per cent.

Crosstie Production

Although crosstie production as reported by ten producers in the Railway Tie Association has shown a steady increase for the first three months of 1946, April production, which totaled 1,347,208 crossties, dropped 8 per cent below the year's high, which was established during March. Moreover, May production reflects a further drop and aggregates 1,124,861, 5 per cent, 23 per cent and 17 per cent less, respectively, than the February, March and April production totals. However, the May total exceeds the 882,650 produced during January by 27 per cent, is 23 per cent greater than the May, 1945, total, tops the 1,074,893 produced during the same month of 1944 by 5 per cent and exceeds the May, 1943, total by 7 per cent; it is 22 per cent less than the total production during May, 1942, and is 12 per cent below the


MONTHLY INVENTORIES AND
PRODUCTION OF CROSSTIES
AS REPORTED BY TEN PRODUCERS
THE RAILWAY TIE ASSOCIATION
COMPILED BY RAILWAY AGE
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1945
1946

1,283,090 produced during the comparable month of 1941.

Crosstie production for the first five months of 1946, as reported by these same companies, aggregates 5,991,723, and is 46 per cent greater than the 4,102,010 produced during the similar period of 1945, tops the production total during the same five months of 1944 by 5 per cent, but is 6 per cent less than the 1943 total for the same five months, 14 per cent below the 1942 figure and 3 per cent less than the 6,202,959 crossties produced during the first five months of 1941.

Inventories of ties on hand by the same 10 producers amounted to 5,903,820 on May 1, which is the highest stock for any month since April, 1944.

Materials and supplies in stock reached a new high on April 1, 1946, when they totaled $616,411,000, which was approximately 0.5 per cent more than on the same date last year, 8 per cent more than on April 1, 1944, 20 per cent more than on the same day in 1943, 19 per cent greater than on the corresponding day in 1942 and 66 per cent higher than the April 1, 1941, total, which amounted to $371,419,000.

According to *Railway Age* estimates, crossties in stock April 1 amounted to $80,502,000, an increase of 5 per cent over the March 1 balance, 6 per cent greater than the $75,886,000 tie stock on February 1, and 11 per cent more than the January 1 balance. April crosstie inventories were fully 23 per cent greater than on the same day in 1941, 21 per cent more than on the comparable day of 1942, 29 per cent more than the April 1, 1943, balance, which totaled $62,280,000, but were 1 per cent less than on hand April 1, 1944, and 3 per cent greater than the April 1, 1945, crosstie balance.

Fuel Stocks Lower

Fuel supplies in stock show a decrease from the $61,502,000 on hand March 1, 1946. The April total of $49,966,000 is a decrease of 19 per cent, 10 per cent less than the February 1 balance and approximately 4 per cent below the $51,816,000 fuel supply on hand January 1, 1946. The April 1, 1946, fuel balance is 61 per cent greater than on the corresponding day of 1941, 21 per cent more than on April 1, 1942, but is approximately 1 per cent less than the April 1, 1943, fuel supply, and is more than 4 per cent less than the fuel supply on the same day of 1945.

Rail in stock on April 1 totaled $25,210,000, a decrease of 12 per cent below the rail stock on the comparable day of 1941, 7 per cent more than the April 1, 1942, balance, and 21 per cent above that of the corresponding day of 1943, but 6 per cent and 7 per cent less, respectively, than the April 1, 1944, and 1945 rail balance.

Scrap inventories for April were valued at $11,773,000, 23 per cent less than the supply one year earlier; it tops the balance on April 1, 1941, by 6 per cent, 1942 by 18 per cent, is 12 per cent greater than the April 1, 1943, scrap balance and is 14 per cent more than the $10,334,000 on hand April 1, 1944.

Materials and Supplies in Stock—Class I Railroads

	Fuel (000)	Rail New & S.H. (000)	Crossties (000)	Store Stock (000)	Scrap (000)	Total (000)
April 1, 1936	$23,560	$35,717	$52,666	$173,433	$8,906	$294,282
April 1, 1937	37,729	38,316	55,424	221,094	8,888	361,451
April 1, 1938	27,847	34,644	73,280	233,396	11,214	380,381
April 1, 1939	29,445	27,695	65,246	197,383	10,686	330,455
April 1, 1940	21,016	34,388	64,466	234,899	11,509	366,278
April 1, 1941	30,984	28,573	65,356	235,404	11,102	371,419
April 1, 1942	41,372	23,635	66,837	377,799	9,947	519,590
April 1, 1943	50,330	20,753	62,280	371,332	10,517	515,212
April 1, 1944	49,938	26,923	81,525	400,722	10,334	569,442
April 1, 1945	52,313	27,142	78,236	441,106	15,345	614,142
January 1, 1946*	51,816	24,840	72,519	435,326	11,258	595,759
February 1, 1946*	55,613	22,439	75,886	439,185	11,676	604,799
March 1, 1946*	61,502	21,930	76,460	435,299	11,539	606,730
April 1, 1946*	49,966	25,210	80,502	448,960	11,773	616,411

* Subject to Revision.

Replaces Bridge Across Sandusky Bay

New York Central substitutes permanent construction for timber trestles that have been maintained with difficulty for almost a century, doing the work under heavy traffic

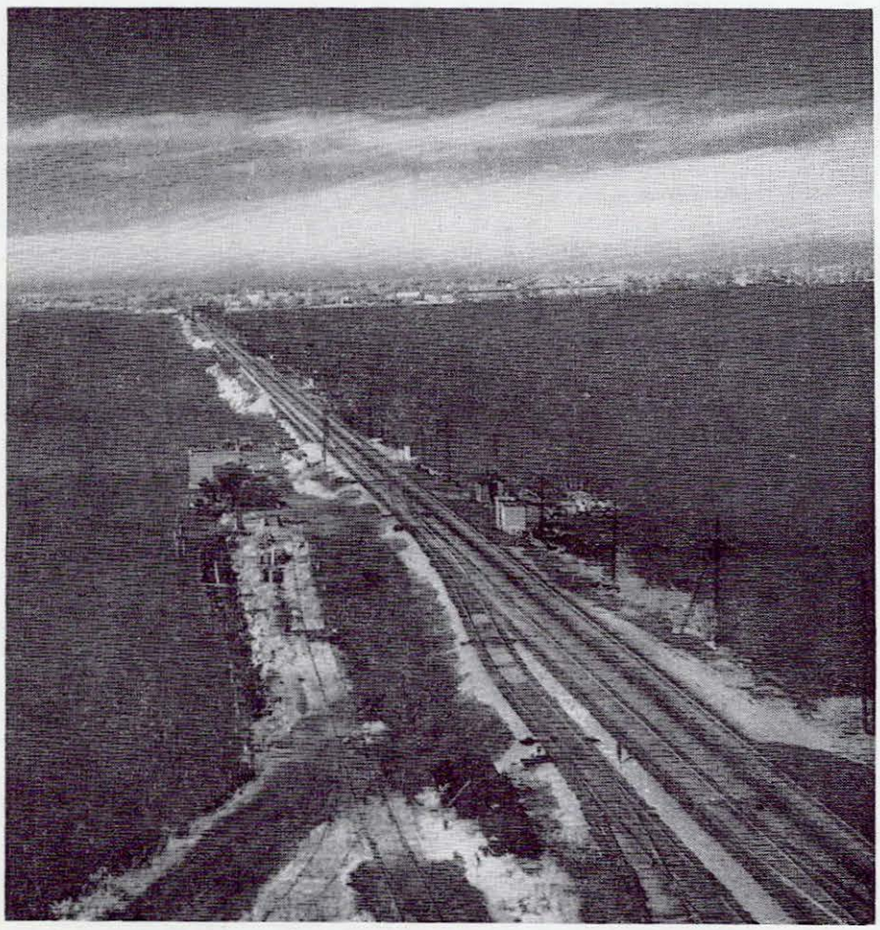
THE maintenance and operation of a sea-going railway has never been an easy task, even under the most favorable conditions. When the operation of such a line is menaced repeatedly by heavy ice gorges piled up by strong and long-continued winds during the winter or by high waves raised during storms at all seasons, both operation and maintenance may be come extremely difficult. This is the situation with which the New York Central, along with its predecessor companies, has been contending for almost a century on that part of its line which crosses Sandusky bay.

As early as 1850, a line of road, chartered in 1846 as the Junction Railroad, had surveyed a route between Sandusky, Ohio, and Toledo, the construction of which included a mile-long trestle across Sandusky bay, an extensive body of water that indents the south shore of Lake Erie between Sandusky and Port Clinton. The principal reason for making this crossing was that the line across the bay shortens the distance between Cleveland and Toledo by six miles, compared with the next shortest route.

Trestle Was White Elephant

Train operation across Sandusky bay was started in 1853. However, from the beginning, the maintenance of the trestle proved to be a continuous struggle, since ice gorges during the winter and wave action at all seasons caused frequent temporary interruption to traffic and extremely high costs for maintenance. In effect, the project developed into something of a white elephant that consumed an excessive portion of the earnings of the none-too-opulent road. The Toledo, Norwalk & Cleveland was chartered in 1850 to build an independent line between Toledo and Cleveland. In 1853, the year that rail traffic was opened across Sandusky bay, this line and the Junction were consolidated as the Cleveland & Toledo. Traffic was maintained over the trestle until 1858, when it sustained extensive and severe damage during a series of violent storms, and rail service over it was abandoned in the belief that sufficient traffic could never be developed to warrant the expense of maintaining the structure. As a result, all traffic that had formerly used the trestle was diverted to the longer route through Norwalk.

In 1869 the various local lines between Buffalo, N. Y., and Chicago were merged to form the Lake Shore & Michigan Southern. The management of the consolidated line realized immediately the advantage of shortening its route between Buffalo and Chicago and, in 1872, rebuilt the bay crossing as a single track. Most of the original trestle was replaced with a rock fill, leaving five well-separated openings which were spanned by pile trestles, one of which included a swing-draw span. These openings were considered necessary to care for the strong tide-like currents that sweep in and out of Sandusky bay, depending on the direction and velocity of the wind.



Bird's-eye view of crossing looking east from Port Clinton

Additional Line an Aid

Within 15 years after this restoration, traffic had increased to the point where a second track was considered necessary, and this was completed with the construction of a double-track swing-draw span in 1892. No serious interruptions to traffic have occurred since that time, although high maintenance costs have been incurred almost every winter, in addition to which the trestles have had to be renewed about every 12 years. Incidentally, in 1915, the Lake Shore & Michigan Southern became an integral part of the New York Central system.

As constructed originally, the trestle and the short fills at its ends aggregated 1¼ miles, and this remains the length of the bay crossing today. The top of

rail ranged from 10 to 12 ft. above mean low water, and both the trestle and the rock fill that succeeded it in part were maintained at this elevation until 1944, when the replacement of the easterly three trestles with permanent structures was undertaken, including a new and heavier draw span of the rolling-lift type.

Water Not Deep

Along the line of the crossing the depth of the water ranges from 6 to 15 ft., averaging about 8 ft. The rock overburden is composed of silt and marl ranging in depth from 4 ft. at the easterly shore to 25 ft. at the westerly shore. Below this overburden is a stratum of broken and fissured limestone which increases in depth from east to west, while underneath this is a solid bed of unbroken limestone of unknown depth, but well below all exploratory drilling. The five bridges, which are numbered 64 to 68, inclusive, from west to east, were 290, 165, 442, 824 and 534 ft. long, respectively. The center bridge, No. 66, included a double-track, pin-connected swing span, 179 ft. long, center to center of pins, on stone masonry, with open-deck pile-trestle approaches at each end.

The trestles were of standard construction with treated pile bents, containing 12 piles each, driven to rock or hard-pan, the treated piles having been installed the last time these bridges were renewed. The bents, which had 14-in. by 14-in. caps, were spaced 12 ft. center to center, and supported three 9-in. by 18-in. untreated Douglas-fir stringers under each rail. At the last previous renewal, the old untreated pile bents had been left in place, although they carried no appreciable load. These old bents had to be removed where they interfered with the installation of the piers of the new permanent structures.

At the time of the 1942 inspection of the crossing, it was considered that, while all of the trestles were again in need of renewal, only the easterly three should be undertaken immediately. Meanwhile, clearance and speed restrictions imposed on rail traffic by the old swing span were hampering the movement of vitally-important war materials. Together with the increased traffic brought about by the war, this made removal of the restriction imperative, so priority assistance was obtained for the reconstruction of the easterly three trestles, including the steel swing span, with substructures of reinforced concrete cylinders and steel I-beam, ballasted-deck spans.

Work on these structures was started early in 1944, and the replacement of the three trestles was completed in that year. The new bridges were built across the existing openings and on the existing alinement, without detours for the rail traffic. However, crossovers were installed at each end of the project and the track was signaled so that trains could be operated in either direction on each track. During the period of construction an average of four trains an hour passed over the work. To avert accidents, a slow order of 10 miles an hour was maintained over the project, and this caused delays ranging from 5 to 10 min. for each train.

The construction methods followed were the same for all three bridges and were unusual in that floating equipment was employed for all operations, except those of handling track materials and the deck materials for the bridges. This floating equipment was utilized for all drilling operations, for driving the cylinder shells, for welding the shells, for grouting and for placing concrete. In other words, this section of track was too busy to make it profitable to employ on-track machines and work trains for any operation where it was possible to avoid using them.

Necessitated Careful Planning

Because uninterrupted operation of trains over the project was a primary requirement, all of the work had to be planned and executed to insure minimum interference with traffic. Single-track operation was permitted during daylight hours where necessary, but double-track operation was always restored between 6 p.m. and 7 a.m.

To facilitate the work, two docks were built at the east end of the project for the contractor's marine equipment, which consisted of two large steam-derrick boats a large steel scow carrying a crawler-mounted crane, two smaller scows carrying two rubber-tired Loraine truck cranes, several smaller scows for transporting materials and a scow having a concrete mixing plant. In addition, three shallow-draft motor boats were used for towing and a smaller motor boat was assigned to general utility work.

The floating concrete plant included three hoppers—one for sand and two for coarse aggregates—at one end of the scow over batching scales. The aggregates were discharged in batches from the hoppers to the scales, from which they were sent on a belt conveyor to a mixer at the opposite end of the scow. When mixed, the concrete was discharged into the hopper of a concrete pump. A cement platform was placed adjacent to and at the same elevation as the mixer to facilitate the addition of the cement.

A crawler-mounted crane was used on shore for unloading material from cars and for charging the hoppers on the scow or storing the aggregates in stock piles. After the scow was loaded with concrete materials, it was towed to the site of the bridge and the concrete was placed without interfering with rail traffic. This plant was used for all of the concrete placed in the easterly three bridges, including that in the counterweight of the bascule bridge, the top of which was 60 ft. above the water, Another method was employed for placing the concrete in Bridge 64, which will be described later.

Since bridges 67 and 68 did not have sufficient clearance above the normal water level, it became necessary to raise the track approximately 42 in. to keep the concrete work above lake level and provide working space under the existing bridges. This was done in two lifts, making one lift per bridge per track per day—approximately eight hours.

In making this lift, the track was taken out of service, the spikes were removed from every third tie across the structure, and the rails, with the remaining two ties, were jacked high enough to slip a 9-in. by 18-in. longitudinal timber flatwise under the rail between the up and down ties. This gave the track a raise of 16 in. Other ties were then fitted in to replace those that had been left down.

This operation was repeated later for the second lift, making a total raise of 32 in. The remainder of the lift, 10 in., was made on ballast after the new spans and the new deck had been installed. At Bridge 66 in which the draw span is located, the raise was only 18 in., and this was made in a single lift. All of this work was done by company forces.

The piers for bridges 67 and 68 are carried on three 5-ft. reinforced concrete columns anchored into the rock and topped with reinforced concrete caps, the whole designed as a rigid frame, while the abutments for these bridges are made up of two outside columns 8 ft. in diameter, and one 5-ft. center column, with a reinforced concrete backwall to retain the fill. The spans of these bridges were made 36 and 48 ft., multiples of 12 ft., to permit the location of the new concrete piers between the 12-ft. bent spacing of the old timber trestles. The superstructures, consisting of five 36-in. wide-flange I-bears to each track, is supported on the new pier caps.

A solid deck, made up of 6-in. timbers with 12-in. by 12-in. ballast guards, rests directly on the carrying beams and is fastened to them by means of hook bolts. All timbers were preframed and creosoted before they were applied.

Lift Bridge Installed

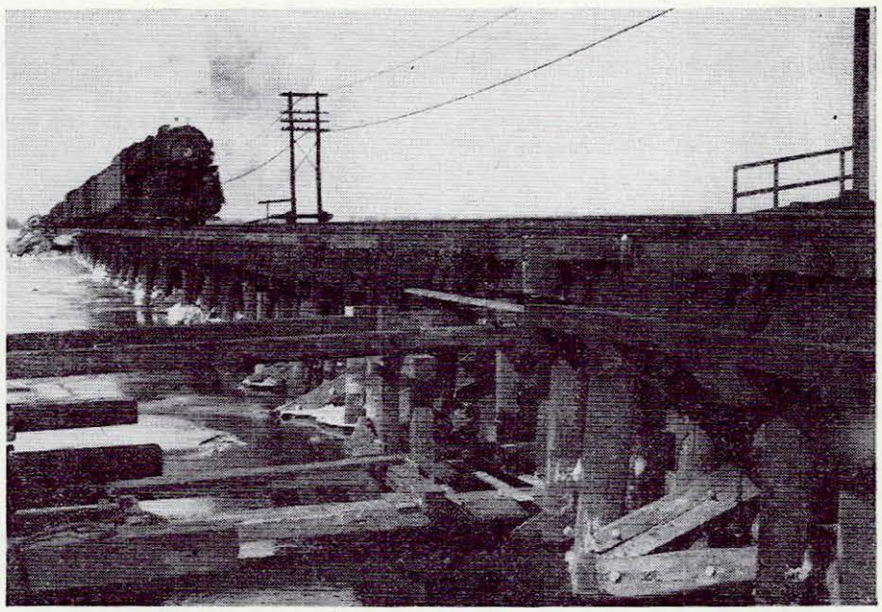
As mentioned previously, Bridge 66 had timber-trestle approaches at the ends of the draw span, the easterly approach being of sufficient length to accommodate a new Scherzer rolling-lift type of bascule bridge with a clear channel span of 65 ft. This double-track span is supported by four reinforced concrete col-

umns, 8 ft. in diameter, anchored into the solid rock. The rest pier is made up of two outside 6-ft. columns and a 5-ft. center column, all of which are anchored into the rock.

To provide for the small amount of water traffic, it was the intention originally to keep the old draw span in service until the new lift bridge had been completed. Because of delay in securing the necessary materials, however, it was not possible to erect the new span in time to take the old bridge out of service and replace it with fixed approach spans before severe winter weather set in. In view of this situation, permission was obtained to restrict the channel temporarily and make the swing bridge a fixed span. The construction of the piers for the new approaches through the area of the old draw span was then carried on simultaneously with the erection of the rolling lift span and the installation of the operating machinery.

In general, the piers for the westerly approach to Bridge 66 consist of concrete columns 5 ft. in diameter, which are surmounted by reinforced concrete caps 6 ft. wide and 3 ft. 6 in. deep. The spans on this approach vary in length from 32 ft. 6 in. to 55 ft. 6 in. All of the steel spans consist of five 36-in. wide-flange I-beams under each track, except the 55-ft. 6-in. spans, which required six beams for each track.

All of the reinforced concrete columns in both piers and abutments were constructed inside welded cylindrical shells made of 5/16-in. and 3/8-in. steel plates. These cylinders served the dual purpose of acting as cofferdams for excavating the overburden and the fissured rock, and then as forms for placing the concrete.

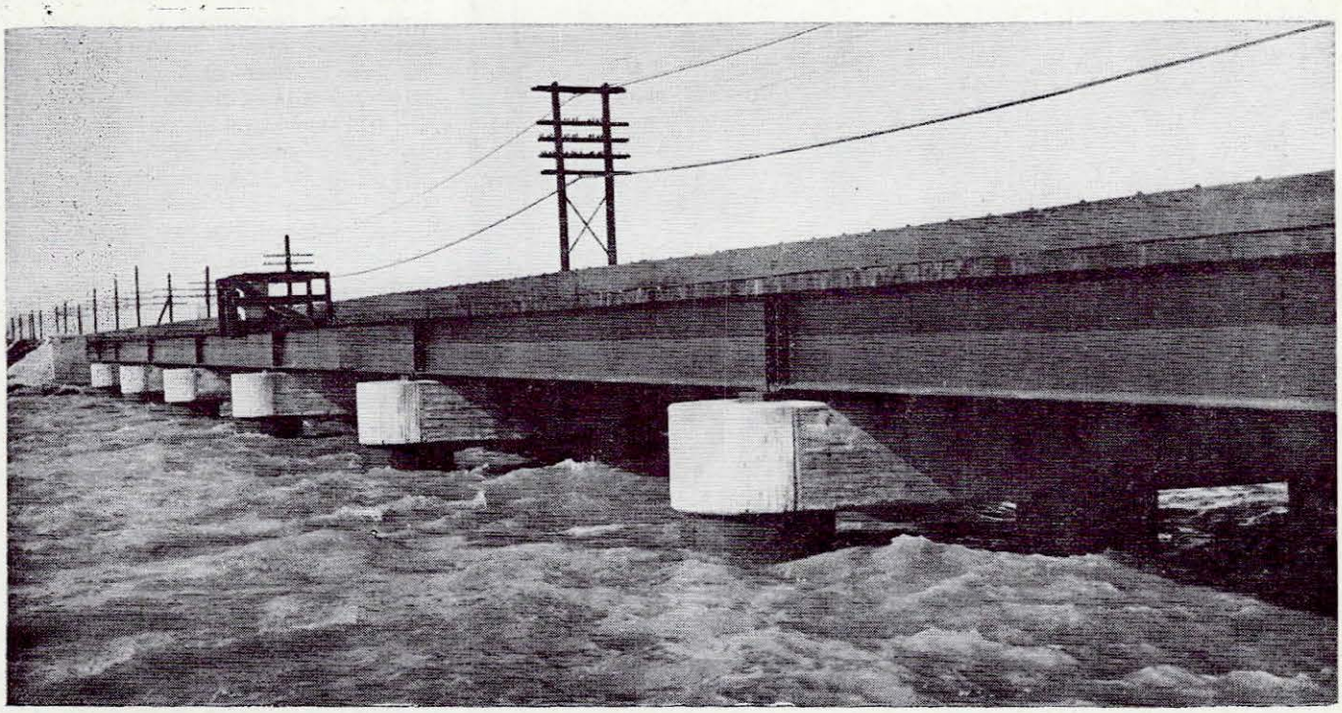


Bridge 68 before work was started in 1944, looking west

Making the Cylinder Fit

When a cylinder was to be sunk, it was set in place carefully in a timber guide, with the open bottom resting on the mud. Each cylinder was of such length that, when set in position for sinking, the top was below the top of rail, and trains could pass without fouling it. To sink the cylinder, a heavy steel plate and driving head were fitted over the top and a McKiernan-Terry 9B-3 steam hammer was employed to drive it to rock or to refusal. If the cylinder continued to sink when the top reached one foot above the surface of the water, driving was stopped and additional length was added by welding, and driving was continued to refusal.

After driving, the cylinder was pumped out and the overburden was ex-



Bridge 68 after completion, looking west, showing features of new pier and superstructure construction

cavated. In some cases the cylinders landed on rock that was suitable as a foundation. In other instances, however, the lower portion was damaged by obstructions embedded in the mud. When this occurred, the damaged parts were cut out and new plates were welded in. The surface of the rock was also quite uneven at places, and at a number of piers the lower edge of the cylinder bore on the highest point. If this high point was not easily removable, exact measurements were made and the cylinder was extended downward to fit the contour of the rock by welding on additional steel plates.

In a large number of instances, however, the cylinders did not land on rock that was suitable for foundation purposes. Where they landed on material that could not be cut out with a calyx drill, the excavation was continued by hand and the bottoms of the cylinders were carried down as the excavation continued, by welding steel plates to the lower ends.

On the other hand, in some cases excessive leakage through the fractured rock made it impossible to carry on the excavation unless the water was sealed off. This sealing was done in some instances by straight grouting over the area both inside and outside each cylinder; in others it became necessary to place a concrete seal in the bottoms of the cylinders before the grouting could be done. The excavation was then continued by hand and the calyx cut was made through either the solid rock or the grouted rock.

All piers and abutments were anchored to resist the pressure of ice floes and of ice gorges, as well as that of wave action. This was done by extending the reinforced-concrete columns forming the substructures well into solid rock. To expedite the rock excavation required to obtain this anchorage, a calyx drill was designed to bore a core 54 in. in diameter out of the solid rock.

To fit the limited vertical clearance under the old trestles, a special model of this drill was designed, designated Type TU-48, with a barrel 60 in. long. This was equipped with a cutting edge, and a 4½-in. hollow drill shaft was attached to the barrel. Drill rods came in sections 1, 2, 3, 4, 5, and 10 ft. long, and were connected with bolted, quick-breaking couplings. The action of the 54-in. bit, in conjunction with steel shot in the slot in the rock, cut out a chase or runway in the rock.

The core barrel was equipped with a shot-distributing frame to distribute the shot evenly around the cutting edge. Water and shot were pumped into the top of the rotating shaft through a swivel connection. Chilled-steel shot furnished by the drill manufacturer were used for cutting out the core.

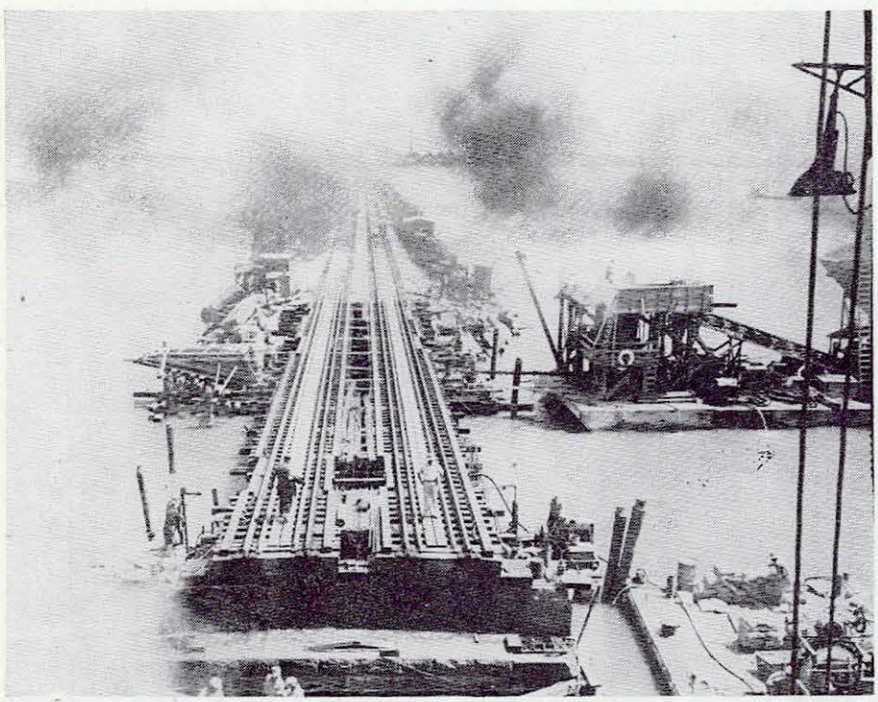
Starting the Calyx Drill

When the excavation had been completed and a cylinder was ready to receive the calyx drill, it became necessary to cut a chase into the rock so that an even bearing would be obtained all around the cutting edge of the drill. Steel shot were then placed in this chase and the drill was lowered to begin cutting.

A core 50 in. deep could be drilled out in about three hours, provided the rock contained no seams. Where seams occurred, shot were lost into the seams and the rate of cutting was slowed down. If the seams were discovered before the drilling was started, they were grouted to prevent loss of the shot. Broken, soft and seamy rock was the most difficult to drill, since pieces broke off and jammed the barrel. In a few such cases whole sections of the core broke off and became wedged inside the barrel.

When the drilling was completed and the drill and core barrel had been removed a 2-in. hole was drilled through the center of the core, into which a quarter stick of dynamite was introduced and packed level with the bottom of the core cutting. This was set off with a battery and almost invariably broke the core loose at the level of the bottom of the cutting. The whole core was then lifted out easily by means of a sling that had been applied around the outside of the core before the explosive was set off. Solid cores were lifted intact from many of the holes.

To handle this drilling with greater facility, a steel scow 100 ft. by 26 ft. was equipped for the work. A crawler-mounted crane was placed on the deck to handle the heavy parts of the drill and the rock cores. The drilling machine was equipped with six flanged wheels which could be moved along a track laid beneath and at right angles to the railway track, and was thus moved from one cylinder to another, it having been found economical to cut and remove consecutively the anchor cores in all three cylinders at a pier, doing this with one set-up of the drill. To support the drill track, steel hangers were placed on each side of each cylinder of the pier, and 12-in. by 12-in. timbers were supported by them. Timbers 8 in. by 8 in. in section formed the track upon which the calyx drill was moved from cylinder to cylinder.



Floating concrete plant placing concrete for easterly pier supporting Scherzer rolling-lift span, Bridge 66

Replacing the Westerly Bridges

Reconstruction of the westerly two bridges was not undertaken until 1945, owing partly to delays in the receipt of material, partly to the desire not to have too much track open at one time, with consequent interference with traffic, and partly to the need for additional marine equipment if so many jobs were to be carried simultaneously.

The opening at Bridge 65 was filled with crushed stone and the old structure was abandoned. This stone filling was held in place under water by a 2-ft. blanket of one-man stone, and the whole

fill was then protected further by a 5-ft. blanket of derrick stone reaching from 5 ft. below to 5 ft. above normal lake level. In addition, similar derrick-sized riprap was placed in front of and alongside all abutments. The filling material behind all the abutments of the four bridges also consisted of crushed-stone ballast, making fills at these points in which little settlement has occurred.

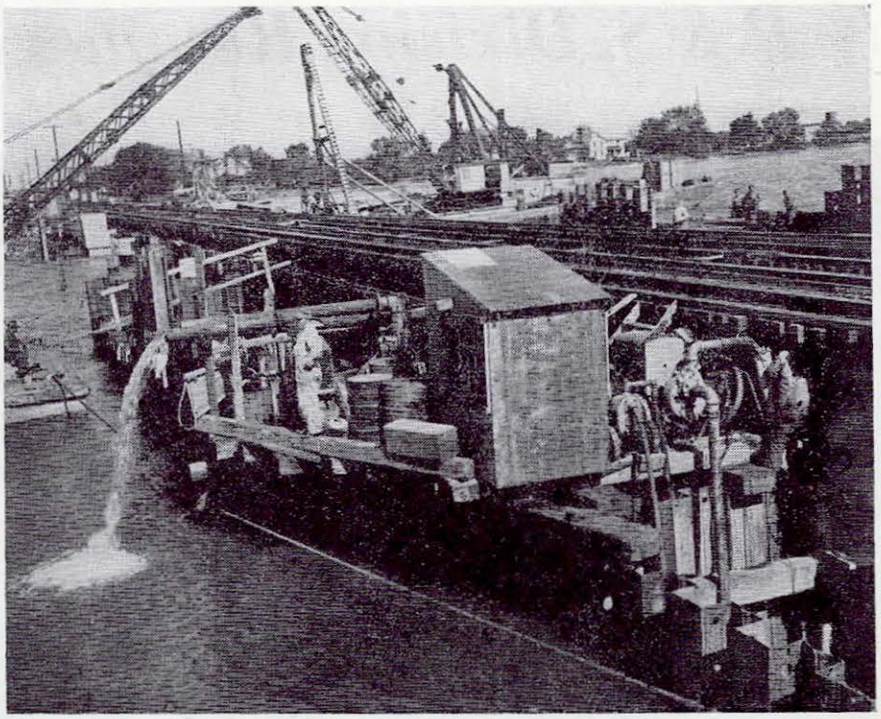
Owing to the depth of the overburden and the character of the material at Bridge 64, it was necessary to employ construction methods that differed in important particulars from those that were followed in replacing Bridges 66, 67 and 68 in 1944. At Bridge 64 the west abutment and the five piers were founded on rock, but the east abutment was supported on concrete piles driven to rock. All units of the substructure of this bridge were of the gravity type.

However, to facilitate the construction of the substructure, an outside cofferdam was driven in two stages around the entire bridge, two-thirds in the first stage and one-third in the second stage. The cofferdam measured 60 ft. laterally and was of sufficient length to enclose each of the stages successively. As soon as completed, the cofferdam was pumped out and the overburden was excavated to the elevation required by the new channel, by means of clam shell buckets operated from floating equipment. Further excavation to an additional depth of 10 ft. was then carried out for the piers and west abutment. Following this, short sheet piles were driven to rock around each pier and abutment to form inside cofferdams that afforded protection to the timber trestle, which was continued in service during the period of construction.

These inner cofferdams were then excavated individually to solid rock and the concrete placed for the finished pier. The sheeting for the inner cofferdams was left in place, but that in the outer cofferdam was pulled and redriven for the second stage of the work, which progressed in the manner already described, except that after the inner cofferdam was constructed for the easterly abutment, excavation was omitted and piles were driven instead.

Used Transit-Mixed Concrete

Because of the gravity sections, the concrete for the substructure of Bridge 64 was placed in larger batches than for the substructures built in 1944. The batching plant was moved to Danbury yard near the west end of the bay crossing, about a half mile from the bridge. A road was constructed adjacent to the fill and the concrete was transported to the site of the work in transit-mixing trucks. The concrete was delivered to a concrete pump set up about 100 ft. west of the new bridge, and approximately 350 ft. from the easterly abutment.



Cofferdam and marine equipment at Bridge 64, summer of 1945

Steel for the superstructure of Bridge 64 was of the same design as that for the easterly three bridges. For all four of these bridges, the fixed spans were assembled adjacent to yard tracks east of the project. Owing to the width of the superstructure, these spans could not be shipped assembled, so they were riveted together at the assembly point. The timber floor, in the form of 8-ft.-wide pads, was then placed on the steel. Individual spans were unloaded at one end of the bridge, adjacent to the track into which it was placed later by means of 50-ton stiff-leg derrick cars.

One derrick car lifted out the old timber deck for a single span, and the second one picked up the new span and set it in position on the new concrete piers.

Track was then built over the span by railway forces, and this operation was repeated for succeeding spans until one track was completed. For this work 7 a. m. to 6 p. m. constituted a working day, as many as 12 spans having been set during this interval, and at 6 p. m. the track was connected and turned over to the operating department for double-track operation. While the work was in progress, heavy-duty fire pumps gave fire protection at each bridge.

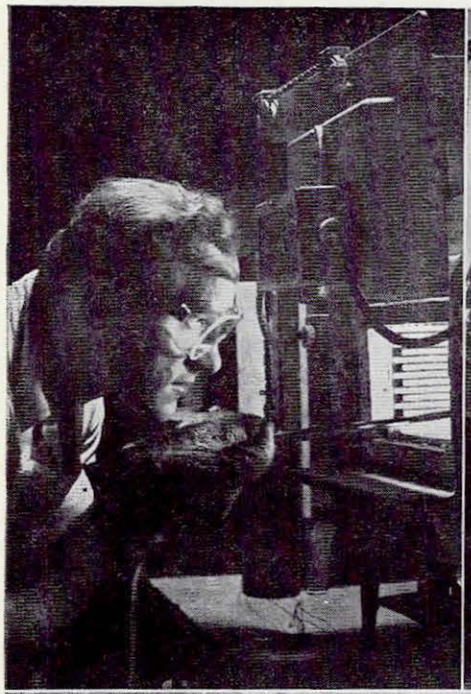
While this job was well organized and generally progressed according to schedule, it should not be assumed that all of the operations that have been described went along as smoothly as this description may have implied. It should be remembered, however, that the work was done under the pressure of war conditions, and there were many times when it seemed that vital materials could not be obtained and that badly needed labor was completely unavailable.

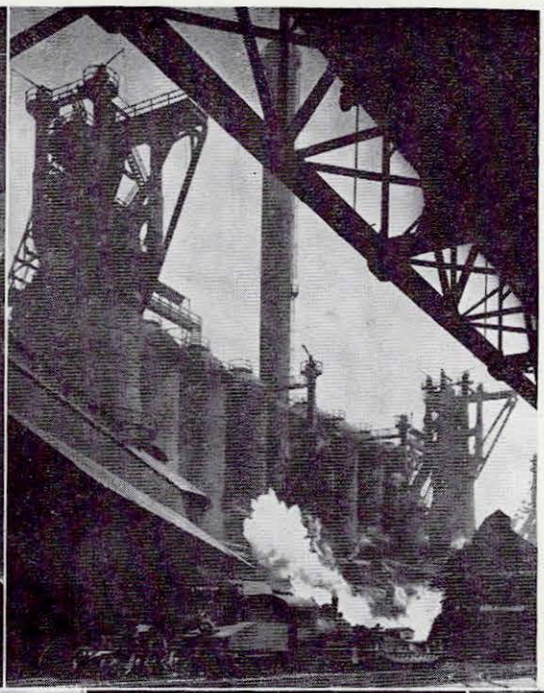
In addition, while 1944 was not particularly stormy, there were times when it became necessary to suspend work temporarily because of rough water. All in all, both the railway and the contractor's forces that were engaged on the work completed it with a higher degree of appreciation of the men of a century ago who maintained the mile-long trestle by manual methods and hand tools, without the advantages of modern power machines and power tools.

These bridges were designed by J. B. Hunley and George E. Robinson, engineers of structures, New York Central Lines West of Buffalo, under the general direction of F. J. Jerome, chief engineer of the Lines West of Buffalo. The construction work was carried out under the supervision of George T. Donahue, district engineer, and A. M. Westenhoff, assistant engineer of structures. All field work was in direct charge of W. A. Bogart, resident engineer.

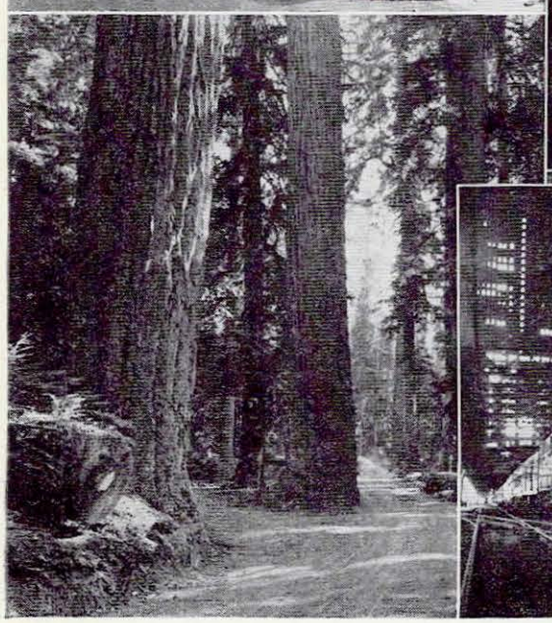
The Walsh Construction Company was the general contractor, of which J. H. Gill was resident vice-president and Frank Mosher, superintendent. Subcontractors were the Bethlehem Steel Company for the fabrication and erection of the bascule span; and the Ferro Construction Company, which placed the fixed spans.

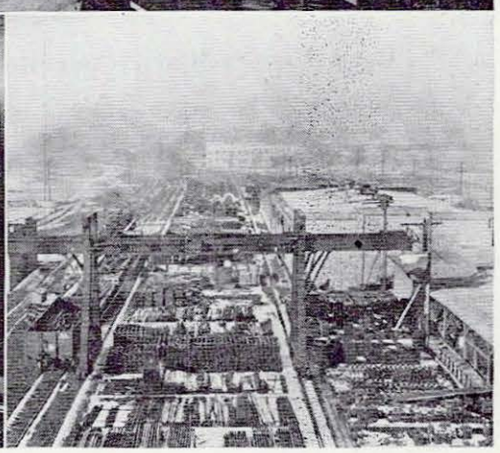
P. & S. Division Resumes Pre-War Program





BECAUSE of the many difficulties encountered in securing sufficient materials, supplies and equipment to keep the railroads operating at capacity during the war, purchasing officers were forced to curtail many of the important activities formerly conducted in conjunction with the annual meetings of the Purchases and Stores Division of the Association of American Railroads. Although the fighting has long ceased, they are still hampered by governmental restraints, material shortages and the uncertainties that prevail today. However, they also realize the full importance of association activities to themselves and to the companies they represent, and as indicated by the accompanying program are sparing no effort in returning to their pre-war activities which have contributed so much to the American railroads.





Robert S. Henry

E. J. Lamneck

D. V. Fraser

Among the highlights of the 1946 meeting of the Purchases and Stores Division, Association of American Railroads, which will be held at the Palmer House, Chicago, on Thursday and Friday, August 8-9, will be addresses by D. V. Fraser, president, Missouri-Kansas-Texas; Clark Hungerford, vice-president, Operations and Maintenance Department, A. A. R., and Col. Robert S. Henry, assistant to president, A. A. R. Other speakers include F. S. Austin, general purchasing agent, New York Central, and C. H. Murrin, general storekeeper, Louisville & Nashville. In addition, reports of 20 standing committees will be presented and discussed. The annual essay contest sponsored by this group prior to the war is also being resumed, and the winning papers are to be presented by Arthur J. Sowatsky and John L. Hamilton.

Registration of members will begin at 9 a. m., Central Daylight Saving Time, on Thursday, and the meetings will convene at 10:30 a. m. on Thursday, and 10 a. m. on Friday.

PROGRAM

Thursday, August 8, 1946

Meeting called to order by Chairman E. J. Lamneck, general purchasing agent, Pennsylvania.
Invocation: Reverend Robert S. Lutz, Corona Presbyterian Church, Denver, Colo.
Address: D. V. Fraser, president, Missouri-Kansas-Texas.
Address: Clark Hungerford, vice-president, Operations and Maintenance Department, A. A. R.
Address: Col. Robert S. Henry, assistant to president, A. A. R.
Appointment of Committees (Resolutions and Memorials).
Action on Minutes of 1941 Annual Meeting.
Report of General Committee.

PRESENTATION OF COMMITTEE REPORTS

Purchasing and Stores Department Manual—Recommended Rules and Practices.
Stationery and Printing.
Material Stock Report—Inventory and Pricing Methods and Practices.
Standard Material Classification.
Scrap, Handling and Preparation—Classification, Sale.
General Reclamation.
Forest Products.
Fuel—Coal, Fuel Oil and Diesel Oil.
Fire Prevention—Safety Practices—Purchasing and Stores Department.
Storage and Material Handling Facilities.
Capacity Loading and Prompt Handling of Cars of Company Materials and Reduction of Non-Revenue Ton-Miles.
Purchasing, Storage and Distribution of Equipment and Supplies Used in Dining Cars, Hotels and Commissaries.
Exchange of Materials.

Friday, August 9, 1946

Annual Essay Contest Committee:
1946 Winners:
"The Purchasing and Stores Department Place in the General Scheme of Railroad Operation," by Arthur J. Sowatsky, chief clerk, Stores Department, Pere Marquette, Saginaw, Mich.
"How Can the Purchasing and Stores Department Know with Certainty What Is 'Minimum Stock'?" by John L. Hamilton, head clerk, office of Reporting Storekeeper, Pennsylvania, New York, N. Y.
Regional Purchasing Group Meetings: By F. S. Austin, general purchasing agent, New York Central.
Regional Stores Group Meetings: By C. H. Murrin, general storekeeper, Louisville & Nashville.

PRESENTATION OF COMMITTEE REPORTS

Diesel Locomotive Parts—Purchasing and Storekeeping.
Simplification and Standardization of Stores Stock.
Conservation of Materials in Light of Improved Methods and Research.
Maintenance of Way and Construction Materials (including Signal, Telephone and Telegraph)—Purchasing, Storing and Distribution.
Stores Department Organization, Practices, Records and Stock Control.
Loss and Damage Prevention—Salvage and Disposition.
Resolutions.
Memorials.
Report of Nominating Committee.
Election.
Remarks by Chairman E. J. Lamneck, general purchasing agent, Pennsylvania.

The Equipment Situation—Not So Good!

LAST fall, at the end of the war, the railroads also came to the end of a period in their history in which they had established records for the handling of traffic and the utilization of equipment in spite of their inability, throughout more than four years of war, to get the quantities of new motive power and rolling equipment which they needed.

Those associated with the railroad and railway equipment industries were, at that time, highly confident that a return to some semblance of peace-time traffic would make it possible for the roads within a reasonable period to modernize their traffic handling plant either by making heavy repairs to existing equipment or replacing that which had become obsolete, and which was to be retired, with new cars and locomotives.

Profitless Operation

Subsequent events, however, proved to be an entirely different story from that which inspired the confidence of last fall. Strikes in major industries tied up one plant after another that could have produced materials or new equipment for the railroads. Early in this year wage increases in the railroad and supplying industries operated not only to increase the cost of the materials and finished products but also increased operating expenses to such an extent that the margin of profit from railroad operation which might assure the purchase of new equipment was not forthcoming. What happened in the matter of the freight rate increase is now a matter of common knowledge, and so today, while handling a total revenue freight loading only 18 per cent under a year ago many roads are faced with the prospect of operating "in the red."

The actual condition of the freight car equipment of the country, early in 1946, was not, in any sense, indicated by the statistics of bad order cars, for instance, nor by the records of car supply. On the one hand a satisfactorily low percentage of bad order equipment could not be taken at face value, for many of the cars that were being offered for loading were not, by any means, up to the generally accepted standard of maintenance. This was particularly true of the cars in which lumber was needed for such purposes as flooring. The continual loading of heavy war-needed materials had played havoc with many of the cars that, except for floors, were in serviceable condition. At the same time the inability to get the materials needed for car repairs left the roads little choice, in the face of continuing demands for equipment, except to make temporary repairs and continue the cars in service.

As to the car supply situation, difficulties began to show up early in the year. It was a case, once again, of being faced not so much with an overall shortage of equipment, even of any one type, as by the fact that the needed numbers of cars of a given type were not at the right place at the right time. The heavy demands, in the first quarter, for cars for grain loading created definite shortages for this type of equipment in the Northwest. So serious was this situation considered to be that I. C. C. Service Order No. 439 was issued, effective January 24, setting up an agency with authority to require movement "without delay" of suitable cars to stations in the specified area from any railroad in the United States.

The effective control of the car supply resulted, late in the first quarter, in the establishment of new high records in freight transportation when, during the week ended March 30, a new high for box car use was made by the loading of 384,112 cars. At the same time other records were being made in the loading of coal and refrigerator cars. The week of March 23 saw over 190,000 cars of coal loaded and refrigerator car loadings were running better than 37,000 a week. A large part of this was made possible by a decided improvement in turn-around time which was averaging around 14 days during the month of February.

Localized Shortages

While shortages existed in three types of cars—box, hopper and gondola—throughout most of the first half of this year they were particularly acute in the first quarter and were heaviest in the Central Western and Northwestern regions with respect to box cars. Naturally the heavy coal loadings, due to anticipation of strikes in the coal industry and the heavy shipments abroad, created shortages of hopper cars in the coal loading regions. The labor troubles of the second quarter quickly changed this situation, however, and the major shortages ceased to exist.

Early in 1946 a thorough study was made of the car situation in order to anticipate requirements and set up a program for the retirement of obsolete equipment and the acquisition of new cars. In the categories of box, hopper and gondolas alone the study indicated the desirability of retiring a total of some 80,000 cars. This number, as an indication of the age of existing equipment, represented less than 20 per cent of the cars of these types that are now over 25 years old. At the first of this year there were on order, with builders and in company shops, a total of about 32,000 cars of these types and the study pointed to the advisability of the roads placing further orders for about 94,000 cars of these three types, orders for 12,000 to be placed during 1946 and the remainder spread over future periods.

How closely this program was adhered to can be seen by the fact that, as reported in detail in the *Railway Age* for July 20, the orders for box, auto, hopper, cover hopper and gondola cars for the first half of 1946, for domestic use, totaled about 12,250 cars. As of July 1, 1946, there were still on order over 34,000 of these three types, 7,700 of which were scheduled to be constructed in railroad shops.

Retirements and Installations

Considering again only the box, hopper and gondola cars, it is of interest to note that in the 10 months ended May 31—the first 10 months of peace-time operation—the Class I roads have retired 32,181 box cars, 13,986 gondolas and 10,961 hopper cars. Offsetting these retirements have been installations of 21,930 box cars, 4,387 gondolas and 9,851 hopper cars. The average installation of 3,600 cars a month has included 2,860 cars designated as new cars and may be assumed to be the cars received from the builders' plants and built new in railroad shops. This production of about 2,500 cars a month from the plants of the various builders represents less than 20 per cent of the estimated full-time car producing capacity of the private builders' shops in this country.

The general situation with respect to freight cars was well analyzed by E. G. Plowman, vice-president, United States Steel Corporation, in an address on April 25 before the New York Traffic Club in which he named five factors working against any easy car supply, viz.: poor car condition; declining effectiveness of heavy loading requirements; prevalence of the five-day week in industry; resort to government priorities in loading and the return to peace-time competitive conditions, both in industry and on the railroads. He pointed out that the change to peace-time operation automatically established a condition wherein shippers and receivers would not pay for overtime loading and unloading as they had done during the war and, as a result, the total number of cars required to handle peace-time business must be larger than would be true under war-time conditions. Mr.

Plowman suggested the return to the pre-war car service rules requiring cars to move to home lines upon the assumption that, regardless of difficulties of securing lumber and steel, cars could be repaired at a more rapid rate on railroad repair tracks if the cars were the railroads' own equipment. He added the observation that there would be an improvement in car purchasing policy in that the types of cars acquired would more closely meet the present needs of on-line shippers if more cars were on home lines.

Regardless of what may be the traffic conditions of the months to come there is, at the present time, a need for the buying of about 80,000 new freight cars, approximately 50,000 of which should be box cars. As matters stand right now orders are not being placed for anywhere near this amount of equipment. To those within the industry the reasons why such orders are not being placed are more or less obvious, but it may be worth while to summarize the present conditions.

A Change of Heart

At the head of the list stand two important uncertainties—earnings and materials. All through the war period the government demanded and received the highest conceivable performance in the matter of rail transportation to back up our armed forces with men and materials. While this was going on government agencies were particularly niggardly in the matter of priorities for materials and supplies for the rehabilitation and replacement of railroad equipment and facilities.

When the war ended the roads were left with a great need for new equipment as well as materials for restoring the condition of equipment. Traffic was holding up and the prospects for earnings were favorable when the pressure of the labor element became so great that wage increases representing many hundreds of millions of dollars were forced upon the railroads and the industries from which they secure the things they need. The same government that demanded such a high standard of service during the war and, giving credit where it may be due, was outspoken in its commendation of the value of the railroad service to the national effort, had a change of heart when it came to the matter of increases in freight rates needed to compensate for the increased operating expenses due to wage increases and increased material costs. The result—greatly reduced earnings, and uncertainty as to future earnings. Under such circumstances can the roads be too harshly criticized for their reluctance to enter upon equipment replacement programs running into millions of dollars?

As to the second of the retarding factors—material supply and prospects for the future supply—it would hardly serve any worth-while purpose to pile up a huge back-log of equipment orders just for the sake of seeing them on the books. The shortage of materials for the building of needed railroad equipment—particularly cars—is a matter that must be looked upon realistically. Freight cars require steel and the steel industry, having troubles of its own with an over-abundance of customers, is operating under both a priorities system and its own system of allocations.

With other industries, and government agencies, making heavy demands, first in one direction and then in another, the railroads have once again, as during the war, come off a poor second. The truth of the matter is that the car builders produced, during the first half of 1946, just about all of the cars they could get materials to build. Many building programs are now held up, sometimes for the want of what might seem to be relatively minor items—but any item needed in the construction of a complete car, or locomotive, can hold up the entire program. So serious has this situation become that many of the manufacturing plants are faced with the possibility of having to shut down entirely and throw thousands of men out of work. Strangely enough the reason is not lack of orders or prospective customers.

When it is considered that the railroads need from 50,000 to 80,000 new cars within the next 12 months and quantity orders for steel and other materials are being quoted for delivery in 1947, it is apparent that certain controlling conditions will have to be changed. It is all right to talk about the government buying 50,000 cars and leasing them to the railroads but a more sensible approach would be to concentrate upon the obstacles that every one conversant with the situation knows exists. Once these obstacles are removed; once adequate earnings and adequate materials supplies are assured neither the railroads nor the car building industry need any help to do a job that they have many times demonstrated their ability and capacity to do.

Passenger Cars

While the pressure for their acquisition may not be so great, from a traffic standpoint, the situation with respect to passenger cars is not much different, and certainly no better, than that with freight cars. On June 1 there were 2,065 passenger cars on order and 752 were ordered during the first half of this year. While the records as to deliveries are not immediately available the installation of 1,575 passenger cars in the five month period ending May 31, 1946, throws some light on the situation. Certainly, many of these cars have come from the railroad companies' shops in the form of rebuilt modernized equipment. Of the total, however, 954 are designated as new cars and 878 of these were Pullman cars. Retirements in the same period totaled 324 cars. Here, again, the lack of hardware, roller bearings, upholstery, plumbing fixtures and lighting, air conditioning and electrical equipment are holding up many passenger car orders that might otherwise have been completed and in service long before this time.

What of Locomotives?

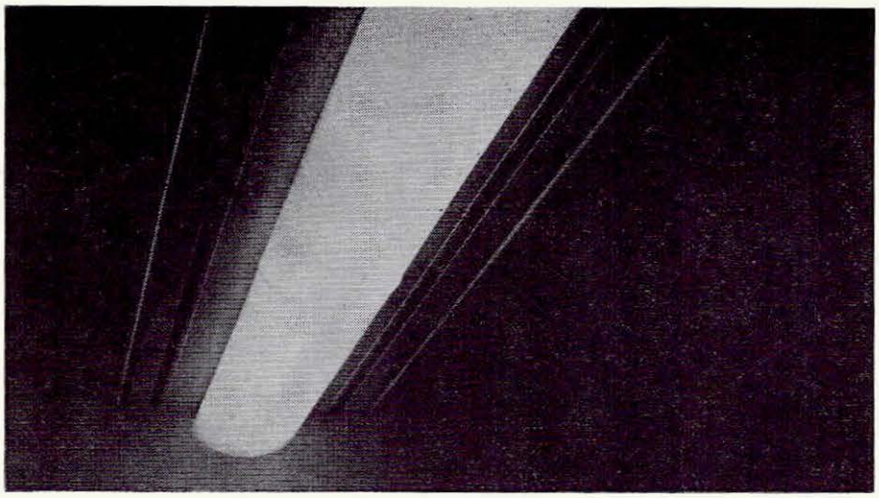
In the field of motive power—freight, passenger and switching—the drastic need for new units is not nearly so great as in the case of car equipment. This statement is based upon need as regards power to haul trains. Since the end of the war the roads have been able to take out of service and place in storage a considerable number of locomotives. In freight service, during the peak war months the roads were using as much as 88 per cent of their freight power and had as few as 264 locomotives in storage out of a total inventory of 22,291. In April, 1946, they were using only 76 per cent of the freight power and had 2,248 locomotives in storage out of a total of 22,186. Considering the total ownership of all types of locomotives there were 76 per cent in service on May 1, 1946, with 15.0 per cent unserviceable or undergoing repairs and 8.5 per cent stored in serviceable condition.

In the first half of this year orders were placed with the locomotive builders for 426 Diesel-electric locomotives and 44 steam locomotives for use on American railroads.

Old Power Must Go

One thing the roads have learned as a result of the war experience. The modern Diesel-electric and steam motive power unit has so much more capacity, availability for service and potentialities for economy in operation as compared with units of over 20 years of age that, with any favorable amount of traffic in the future the railroads must, of necessity, in the interest of profitable operation if nothing else, replace a large part of their existing inventory with some form of modern power.

There are many indications that, over the next ten years, the roads need not necessarily confine themselves to the use of existing locomotive types or designs—the steam turbine and the gas turbine locomotive are soon to break out into the middle of the stage. What their future may be is still anybody's guess but one thing is certain, if a way can be found to utilize coal as efficiently as oil there is no better place to make use of such a development on the railroads.



A combination fluorescent ceiling trough and conditioned air distributor

Acrylic materials have strength, shatter resistance and dimensional stability — Optical characteristics not affected by aging

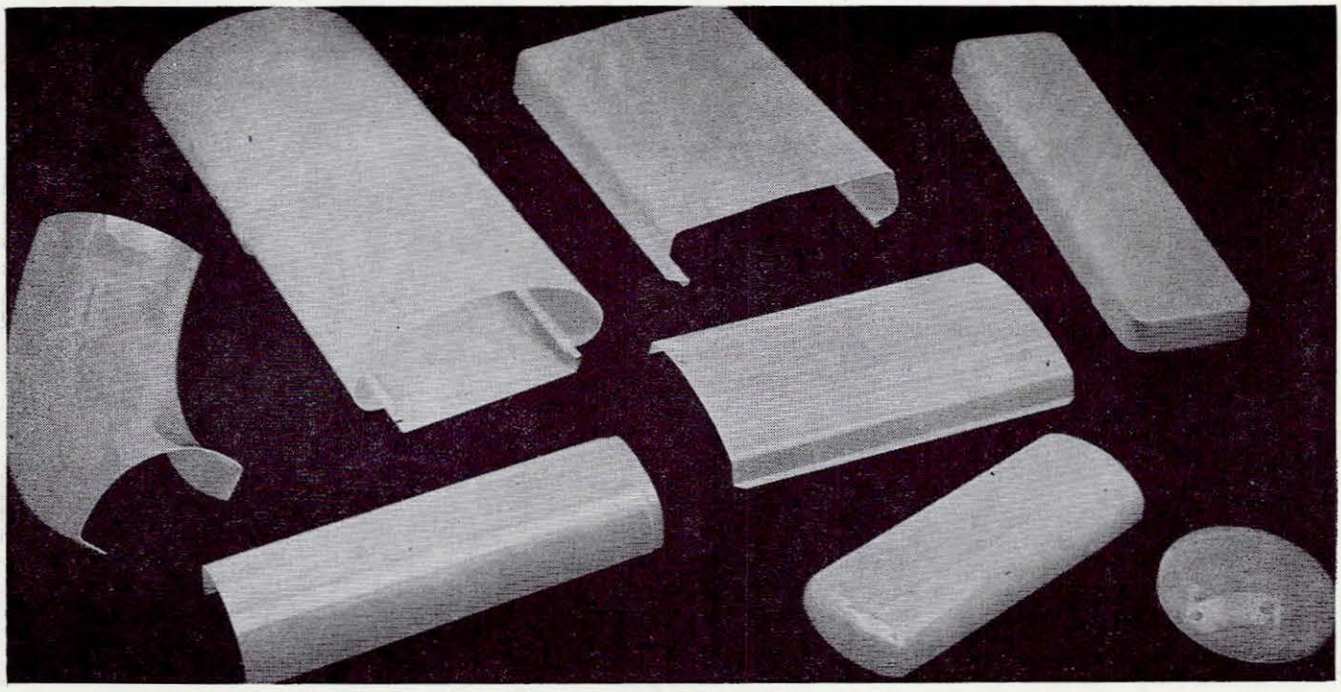
Plastics for Railway Car Lighting

By L. SCHEPMOES
Manager, Safety Car Heating and Lighting Company

TRENDS in modern lighting, whether it be in the transportation field or in commercial or home lighting, point toward larger area, low brightness sources of illumination. Fortunately, both plastics and fluorescent lamps fit into this trend perfectly. Fluorescent tubes, with their larger areas of lower brightness, are a big step toward better diffusion and softer shadows. Plastics permit another step forward, in that their lighter weight and greater strength permit the use of far larger diffusing elements than were heretofore practical.

Several plastics are well suited for diffusers, shields and fixtures. They have high strength and shatter-resistance, and low unit weight. However, it must be remembered that among the many plastic materials each has its limitations. As with any new development, a period of careful study and service testing must precede large-scale adoption. In our work with plastics, we set up a comprehensive program of laboratory and shop testing, as well as design characteristic study, to determine the materials best suited to lighting. We asked for low unit weight, good dimensional stability, expansion or contraction of less than 1/32-in. per 3-ft. length for every 15 deg. F. change in temperature; strength enough to bear the weight of baggage when the plastic is used in overhead

A baggage rack with a translucent plastic floor and fluorescent lights



An assortment of translucent plastic shades

racks; life equal to that of the car; flexibility enough in thinner gages so that the shield can be snapped into position in fixtures; excellent light transmission qualities (at least 82 per cent in 0.06-in. thickness of diffusing material); and the ability to withstand vibration. These are the most severe operating conditions for this type of lighting fixture. And the railroad industry, of course, is a rugged testing ground for both ideas and materials.

Acrylics Meet Specifications

The one member of the plastic family which met all of our requirements was the acrylic type, specifically, Plexiglas. This plastic, easily formed at a temperature of 250 deg. F. is half the weight of glass, yet as strong as spruce. Nor is its strength materially affected by low temperatures, weathering or continued flexing. It is the most resistant of all plastics to the effects of aging on its physical properties and dimensions. Extensive experience, obtained throughout a period of ten years under a wide variety of aging conditions, practically demonstrates that Plexiglas will not be subject to a change of pliability, the development of brittleness or a tendency to crack in railway car lighting installations.

Translucent acrylic has a light transmission value of 80 per cent or better; that is, 80 per cent of the light rays entering the plastic from one side will be transmitted through the plastic and out the opposite side. Transparent acrylic has a light transmission value of 92 per cent, a higher light transmission, in fact, than any other commercial material with the possible exception of the highest grades of optical glass. White translucent Plexiglas offers comparable optical efficiency, since the diffusing medium absorbs only negligible amounts of light. Several translucencies are available with varying light transmission and reflective factors. Neither clear nor white translucent Plexiglas will show any significant change in color or light transmission value due to aging in car lighting applications. Recent tests have shown that the use of fluorescent lights with the translucent acrylics affords the maximum in "seeing comfort" so that the reader-passenger has no sensation of glare.

The original acrylic plastic installations were in Southern Pacific and Santa Fe cars in 1939. The New Haven recently ordered Plexiglas fixtures in its entire fleet of 180 new passenger cars, while the Atlantic Coast Line, Florida East Coast, Norfolk & Western, Southern, Baltimore & Ohio, Seaboard, Missouri Pacific, Illinois Central, Rock Island and other railroads have specified the use of acrylic plastic in their new equipment.

Advantages of Acrylics

A major advantage of acrylic plastic is its ability to withstand warpage and changes in dimension, a strong criticism of other plastics. The dimensional changes of Plexiglas under varying atmospheric conditions are predictable, cyclic, and less than those of other transparent or translucent sheet plastics suitable for use in lighting installations. Those dimensional changes which do occur in Plexiglas can be satisfactorily accommodated by proper design of applications. Even the most complicated formed shapes of Plexiglas can be designed and made to be indefinitely stable as far as practical car lighting installations are concerned. The softening point of acrylic plastic, as determined under A. S. T. M. tests, is 140 deg. F., well above the normal room temperature of 68-72 deg. maintained in modern well-ventilated coaches. Even though higher temperatures are reached under desert and shop conditions, it is very doubtful if the softening point of acrylics would be reached.

Crazing of plastics has sometimes occurred under conditions of improper maintenance. Though crazing will appear when penetrating solvents are used in cleaning the fixtures, the new transparent or translucent plastic fixtures will give long service if simply cleaned with a clean, wet chamois cloth which should be rinsed often to remove dirt and grit. Under normal operating conditions, crazing will not appear in the new easy-to-clean, easy-to-install acrylic plastic fixtures. The use of a damp chamois also removes any static charge which may accumulate on the plastic under certain conditions. In addition, the tendency of Plexiglas to develop and retain such a charge can be practically overcome by the use of an "anti-static" wax which is easily applied and long-lasting. If this was is used, maintenance employees should be instructed to use dry, rather than wet, chamois or cloth.

Young Charges Law Violated

C. & O. chairman renews attack on "banking control," hits at I. C. C. and insurance companies

ROBERT R. YOUNG, chairman of the Chesapeake & Ohio, is making a public distribution of a statement entitled "Banking Control of Railroads—Violations of the Law," which, he discloses in a note of transmittal, he recently forwarded "to each member of Congress in support of the Reed and Wheeler bills relating to reorganization of the railroads."

The statement refers to his February 28 testimony favoring the Wheeler bill (reported in *Railway Age*, March 9, page 507) in which he recalled that he made the following assertion:

"Congress in Section 5 of the Interstate Commerce Act has made it unlawful for the same group to acquire control of more than one carrier. . . . There is evidence . . . that most railroads are thus controlled, that essentially every reorganization plan promulgated under Section 77 was designed to extend such control. To the extent such commonly-controlled carriers are competing, there is also violation of the Sherman Act."

Continuing, Mr. Young's statement says (in practically full text) "despite the fact that a substantial portion of this testimony was reprinted in *Railway Age* and a special mailing of it was made to those listed in 'Who's Who,' nothing has yet been done about it, save the diligence of the Wheeler committee in progressing S. 1253, a bill to correct the situation with respect to those carriers still in bankruptcy.

"Bad Situation"

"The apathy on the part of the chief agency of law enforcement affecting carriers, the Interstate Commerce Commission, is not as surprising as it may appear, for in my earlier testimony I said with reference to those long-endured violations: 'They continue to get away with these things, and nobody seems to have had the ability to stop them as yet. I say that when a group with its spiderweb of economic power has proven itself to be stronger than the government, it is a pretty bad situation.' . . .

"The Interstate Commerce Act makes it unlawful for any person to *participate* in bringing two or more carriers under common control without specific approval of the Interstate Commerce Commission. It reads in part:

'It shall be unlawful for any person . . . to *participate* in accomplishing or effectuating, the control or management in a common interest of any two or more carriers, however such result is attained, whether directly or indirectly, by use of common directors, officers, or stockholders, a holding or investment company or companies, a voting trust or trusts, or in any other manner whatsoever. . . . The words "control or management" shall be construed to include the power to exercise control or management.

'The term "person" as used in this part includes an individual, firm, copartnership, corporation, company, association, or joint-stock association; and includes a trustee, receiver, assignee, or personal representative thereof.'

"The above language, which certainly sounds as though it means business, is quite irreconcilable with the state of affairs that is revealed by the most cursory examinations of documents on file with the commission. We find that the following closely related eastern life insurance companies participate, either jointly or separately, in the control of bankrupt carriers, many of which are highly competitive: Metropolitan Life in 22 railroads; Prudential Life in 16; New York Life in 14.

"The above situation is equally irreconcilable with the commission's own language when it applied another section of this same act on March 11, 1942, to an eminent engineer: (*In re Coverdale* —252 I. C. C. 672, 675).

'Under the provision of section 20a(12) of the act, a person may be an officer or director of one carrier, and no more, unless we find that the holding of such positions with more than one carrier will adversely affect neither public nor private interests. For us to make an exception in favor of an applicant, there must be strong and convincing showing that it should be made. As stated in *In re Astor*, supra, it is not enough that we can see no harm in what is proposed. It is essential that we be able to find beyond doubt that neither public nor private interests will suffer.'

"The commission in Mr. Coverdale's case denied his request to serve on the board of the second railroad though it was non-competing with the first railroad; but bankers, if less useful, are more favored. In my testimony of February 28, I stated: 'For three generations, Morgan and Kuhn-Loeb have dictated the policies of the American railroads without a dollar of permanent ownership therein.'

"One who did not know the facts might question such a broad statement, but the sad part of it is that millions of investors, and bankers outside the charmed circle, do know the facts, and no one knows them better than the Interstate Commerce Commission. Sixteen of the 25 directors of the Metropolitan Life Insurance Company are connected with top eastern banks, as are 8 of the 16 Prudential directors and 15 out of 24 New York Life directors.

"Just as the 35 railroads in bankruptcy are controlled by this small group of banker-controlled insurance companies, in clear violation of both the Interstate Commerce Act and the Sherman Act, so are the 87 Class I railroads not in reorganization also controlled. Here the relationships are necessarily more ramified, but they all tie into the same place—with common interests and common designs. A banker's heart can be deep in Texas, but not if he aspires to a railroad board.

"I have a compilation which shows that 79 per cent of the non-employee directors of these 87 solvent railroads are affiliated with financial institutions. If we take only the 10 major Morgan roads, we find that 86 per cent of the directors are so affiliated; and of the six major Kuhn-Loeb roads, the figure reached 89 per cent.

"Evasions of the Law"

"A voting trustee of a reorganized railroad usurps the voting rights of the stockholders; he becomes vested with complete control of the railroad, its directors and its officers, subject only to his own conscience.

"Because the voting trust became so abused—so odorous—that by force of public opinion it was outlawed even by the New York Stock Exchange in the days of Whitney; Congress in the reform laws of the 'Thirties regarded the device so much in the realm of the dodo that in drawing legislation to control the acts of corporate officials, voting trustees were overlooked. Yet at that very time a great new wave of them was being surreptitiously planned. They became the motive for the greatest and most uncalled-for 'squeeze out' in all history, and 'to cover up' led later to a long succession of crimes.

"The legislative safeguards I speak of, aimed at officers and directors, were designed to prevent abuses of power or privilege inherent in positions occupied by 'insiders.' Yet, their absolute master in the bankrupt carriers—the voting trustee—operates outside these laws.

"Is there any wonder that bankers and insurance executives thought up excuses for putting even solvent corporations into such a pleasant state of mesmerism; into bankruptcy, where operations could be conducted in the dark? It is not necessary to take my word for this. I will quote Senator Wheeler's report:

'To summarize, many of these railroads could have been left out of the reorganization proceedings altogether, as 10 of them were actually left out for 4½ years until the institutional group decided to put them into court for purposes of consolidation. Fifteen of these roads have no right to be in court at all, at the present time; there is no ground for burdening the court to reorganize them; they can pay all their debts which are publicly owned, and not merely of an intercompany bookkeeping nature. They are being kept in court under a reorganization statute, for the purpose of consolidating them, but doing so outside the consolidation statute enacted by Congress to govern all consolidations.'

"One cannot refrain at this point from quoting the one terse sentence out of books of quotations attributed to J. P. Morgan: 'A man always has two rea-

sons for doing anything—a good reason and the real reason.'

"Section 77 of the Bankruptcy Act, as administered by the Interstate Commerce Commission, became the bankers' Golconda. They could not only get a tighter grip on a vast reservoir of patronage, but by the use of voting trusts they could administer that patronage without the risk of violating the following provisions of the Securities Exchange Act:

a. Requiring an officer or director upon his election to file a statement of ownership of stock in the company with subsequent monthly changes. (Thus Congress stressed the importance of ownership in those in authority and the public disclosure of its absence.)

b. Prohibiting an officer or director from selling any of the company's securities which he does not then own. (Just as Congress considered the incentive of ownership important, to have less than no ownership—to be 'short'—was made a crime. 'Short' in Wall Street parlance means to bet that a stock goes down, instead of up, by reversing the normal sequence of, buying before selling; the 'short' sells before he buys; thus, if trusted with the corporation's management, he furnishes himself with an incentive to wreck the company.)

c. Requiring any director or officer of a company who makes a profit by purchasing and selling its stock within a six months' period to turn such profit over to the company. (Congress thus removed the incentive for withholding important information from stockholders for stock market 'plays' by 'insiders'.)

d. Requiring officers and directors to submit to stockholders, when they stand annually for re-election, numerous items of information concerning the company and themselves, including their remuneration and any personal dealings they have with the company; this for obvious reasons. (Where there are voting trustees, the owners not only have no choice as to who shall run their company, but they also receive no information about the activities of the real 'insider'—the voting trustee.)

"In addition to the provisions of the Interstate Commerce Act already mentioned, relating to 'control' and dual directorships, voting trustees also evade another provision of this act:

Prohibiting any officer or director to receive any benefit from the issuance of securities by the company. (This provision was aimed specifically at bankers on railroad boards who are in the security business.)

"Voting trustees also evade a special provision of the federal law, formerly known as the Clayton Act:

Prohibiting a carrier from engaging in business transactions amounting to more than $50,000 a year with any legal entity, a member of whose board of directors or whose president, manager, purchasing or selling agent, occupies a similar position with the carrier. (This provision was to prevent railroad boards from becoming infested with car builders and other suppliers who thus could deal with themselves, without competition—and not at arm's length. Just as this law, like those above, fails to reach voting trustees, so do its provisions fail to apply to bankers' commissions, bank deposits, fiduciary fees, transfer agencies and the like—happy hunting ground of the banker who can and still does deal with himself in these matters with impunity.)

"Voting trustees also evade certain provisions of state laws relating to the conduct of officers and directors of corporations within their jurisdiction.

"The Public Hurt"

"It has been seen that the owners and the public are thus illegally deprived of any voice whatever in the bankrupt railroads, or of virtually any voice in the solvent railroads; and eventually, because of dry rot, may be deprived of the railroads themselves.

"It is evidenced on every hand that there is a crying need for competition between, and a diversity of talents in these railroad directorates: of scientists, experts in efficiency, advertising, sales promotion, personnel, public relations, labor relations, and the like. Is there any wonder, looking at the directorates, that railroad policy has been uniformly and traditionally to create debt and never to repay it, except by reborrowing; why there has been no urge to apply the swollen cash balances of bankrupt carriers to repayment of the R. F. C. and other interest bearing debt; why Chesapeake & Ohio has been conspicuously alone in advocating such needed reforms as:

"1. Competitive bidding for new issues of securities.

"2. Through Chicago-St. Louis train service.

"3. Elimination of the black market in Pullman space.

"Even to the Commissar"

"Bankers are sensitive to their customers' feelings; they may also have deposits from (or be on the boards of) airplane companies, the Parmalee Transfer Company, and the like."

Mr. Young's statement went on to say: "It has been the strong ownership interest that has kept Ford, Chrysler, duPont, General Motors, and a myriad of other vital organizations (synonyms for progress) virtually debt-free. A banker on a railroad board, without ownership, must inevitably have an adverse interest—why else would he bother? If voting trusts are going to be gratuitously created; if the owner is to be denuded and disenfranchised over his protests, we had better go to the English system of paid managing directors—or even to the Commissar.

"Until some means is found of deconcentrating the unhealthy phases of this banking power, which extends far beyond the railroads and into government itself, and jurisdiction is returned to the rightful owners, we will continue to have an uneven economic growth of the country and a situation in which the nation's foreign as well as its domestic policies are dictated from 'The Corner.'"

With this statement Mr. Young also enclosed a tabulation by C. & O. Vice-President Wenneman of directorates held in leading banks by directors of the three insurance companies he mentions, and another tabulation showing positions held by officers of these insurance companies in connection with the reorganization of specific railroads which are said to be dominated by Wall Street.

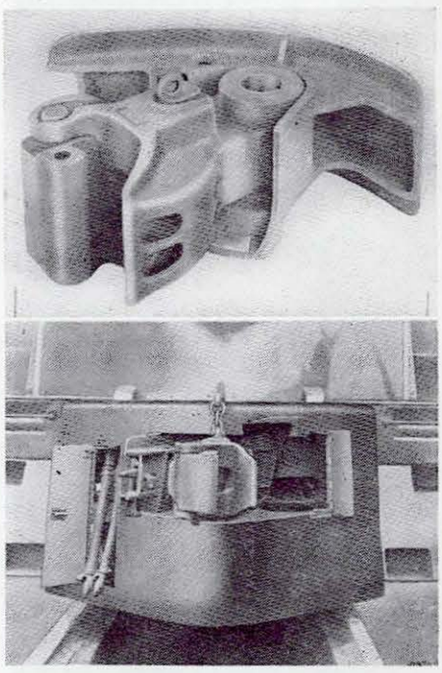
* * *

Retractable Pilot Coupler

To reduce the hazard of grade crossing accidents caused by protruding couplers and to contribute to the neat appearance of the locomotive, a retractable pilot coupler has been designed by the Buckeye Steel Castings Company, Columbus 7, Ohio. This device, in combination with a smooth-surfaced cast steel pilot, tends to lift and deflect obstacles clear of the track, and contributes to modern streamlining of the front of the locomotive.

The coupler is mounted in a pocket on the pilot door, and both pivot together on a 3¾-in. diameter pin. As the door moves to an open position with the couplers it locks in open position, while the coupler is free to swivel a predetermined amount independent of the door. The boss on the shank of the coupler extends the full distance between the top and bottom bosses on the pilot; thus the pin is relieved of binding stresses and is in direct shear.

To retract the coupler, the uncoupling links are unhooked from the operating rod, and the door is unlatched from its open position and rotated to the closed position. The coupler will move to the retracted or closed position with the door. The spring latch holds the door in either the open or the closed position.



The Buckeye retractable coupler

The lower view shows the coupler in position with the doors open; the upper view illustrates details of construction

Manufacturers Offer Many New, Modified and Diversified Products

Railroad Antennas

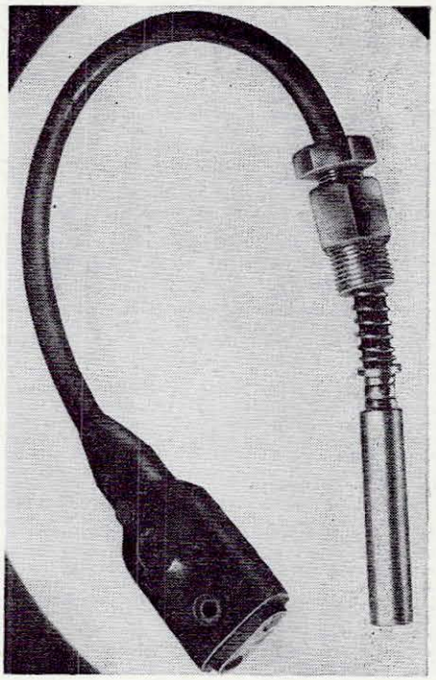
Two antennas have been designed to meet transmission and reception requirements of railroad service by the American Phenolic Corp., Chicago. For two-way communication between train and fixed station, and end-to-end service, a broadband 160-megacycle ground-plane antenna utilizes the metal top of the car for its ground plane. It is fed by an armored coaxial transmission line. The radiation pattern in the horizontal plane is circular in shape and the voltage standing wave ratio is less than 1.5 from 152 to 162 mc. The gain of the antenna is 0.5 decibels less than a dipole.

The assembly is constructed of steel, heavily cadmium plated, and has an overall height of 14½ in. It is secured to the car by three ¼-in. bolts. Installation has been simplified by mounting flexibility. The armored transmission line may be mounted from the top of the base or may be brought up through the car roof and antenna base.

For reception in the standard broadcast band, the Amphenol passenger-car antenna was developed to eliminate the interference formerly encountered by the combination of a super-sensitive receiver with an unscientific aerial. The use of shielded lead-in and complete, scientific insulation of the antenna is said to keep out electrical disturbances from within the train itself, from communication and power lines, and from static electricity caused by particles of dust, coal dust, sand, and snow. The antenna is completely weatherproof, and has protection for personnel and radio equipment in the event of a power line falling across it.

The antenna with its insulation and aluminum supports is strong enough to hold the weight of a man. The antenna extends above the top of the car to a maximum height of 9 in., and is capable of serving from one to twelve radio sets.

The Amphenol antenna for two-way radio communication



The Fenwal thermoswitch is compact and fully enclosed

Journal Alarm System

The Fenwal journal alarm is designed to detect an overheated journal box before serious trouble develops by giving a visible and an audible warning in both the locomotive and the car concerned. Unnecessary delay in locating hot boxes is avoided by the push buttons in the control panel for finding the bad box.

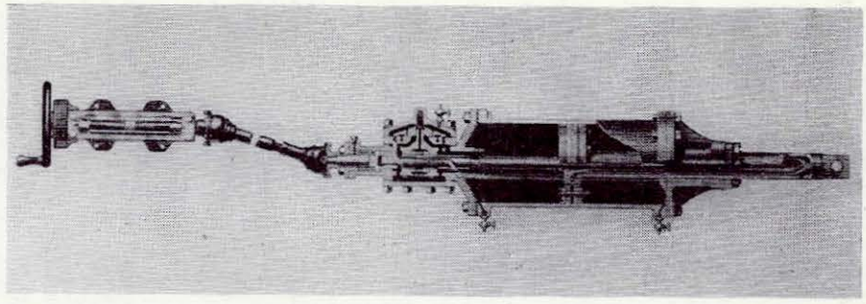
The critical detecting unit is a thermoswitch which is rugged, dust-proof, moisture-proof, compact, and fully enclosed. The alarm panel actuated by the thermoswitch may be installed at any convenient point in the car or locomotive. Normally a green light will show, indicating that all detectors are closed and that the wiring is complete. When a dangerous temperature rise occurs, a red light goes on and a buzzer sounds. Grounds are detected by a yellow light which is energized when grounds occur. Test buttons are included for checking the alarm and the ground detector.

The journal alarm panel showing indicator lights, test buttons, and buttons for locating the defective box

Two systems are manufactured by Fenwal, Inc., Ashland, Mass. For trains of fixed consist the all-electric type is used. This type has a single pair of wires running through the cars carrying the alarm circuit in series through the alarm panels in the various cars to the locomotive. The locomotive unit monitors the entire train, and the car units monitor the individual journals.

For cars not on permanent assignment, the electro-pneumatic system is used. The air signal line transmits the alarm to the cab. An electro-pneumatic timer sends an alarm through the air signal line in any code desired.

Equipment for these systems is furnished for 32, 64, or 110 volts. Ground-shielded conductors are used for all wiring. The connectors to the truck receptacles are waterproof and flexible, and offer no impediment to the rapid change of axles or trucks.



The Franklin Type F-3 reverse gear accurately sets and closely maintains the cut-off

Self-Locking Power Reverse Gear

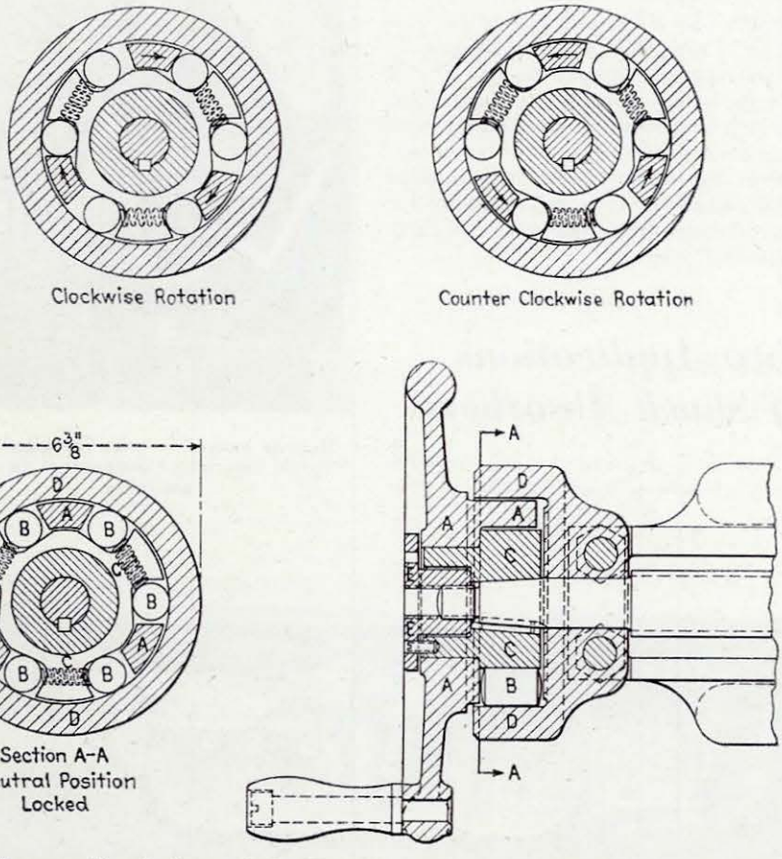
The Franklin Type F-3 precision power reverse gear features an automatic self-locking clutch to maintain the cut-off at the point set by the engineer. The clutch prevents unintentional movement of the hand wheel by forces transmitted back through the reverse gear.

The self-locking mechanism is a roller clutch containing six rollers, three of which act in each direction. These rollers lock by friction between the locking cam carried on the indicator shaft and the outer housing affixed to the indicator screw bracket. Any tendency to turn on the part of the locking cam is overcome by wedge action resulting from the contour of the locking cam. This contour is such that movement of the locking cam, in attempting to drive the hand wheel, causes a reduction in the volume of space available for the roller to rest in. This reduction of volume results in the roller acting as a wedge and thereby stopping rotation of the hand wheel and consequent change in the cut-off. The rollers are in locking position at all times except when the cut-off is being adjusted.

When adjustment is being made the appropriate set of rollers is moved by the three hand-wheel fingers to a position of larger area on the cam where they allow freedom of motion for rotating the cam. The adjustment made will be closely held by the automatic locking feature of the clutch; no manually operated latch is required.

There are several design features which contribute to the accuracy and the maintenance of the setting. A one-to-one ratio exists between the reverse-gear valve and the piston. Because of this smaller ratio of movement the cut-off can be better maintained, and the locomotive performance increased. The rotary reach rod has slip joints to nullify the effect of expansion and contraction on the indication of the cut-off. No difference exists between the indication when the engine is hot and that when it is cold. The absence of pins and levers in the construction practically eliminates lost motion. The valve motion is protected, and maintenance reduced, by an air cushion which absorbs the valve-motion shocks.

This precision power reverse gear is a product of the Franklin Railway Supply Co., Inc., New York 17.



Cross-sectional views of the Franklin reverse gear showing how the rollers provide wedge action to lock the handle in place. Parts referred to by the symbols are: *A*, the hand wheel; *B*, the rollers and springs; *C*, the locking cam; *D*, the clutch housing; and *E*, the retaining nut

High-Speed Locomotive Booster

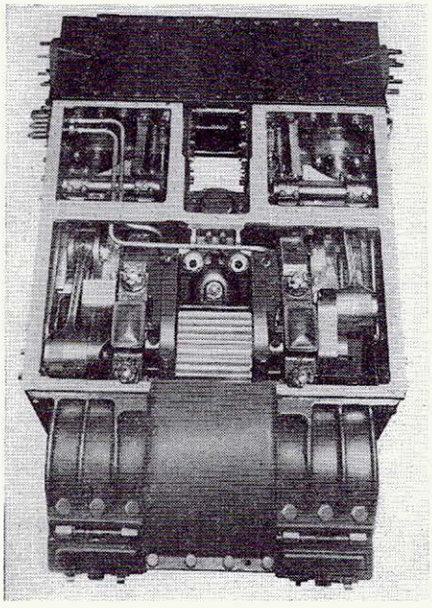
The type E-1 Franklin booster is designed to give effective aid to the locomotive at speeds as high as 30 to 35 m. p. h., and the booster control permits the meshing of the booster gear with the trailer-axle gear at any speed up to 20 to 22 miles per hour.

To obtain high steam economy, the

booster can use high pressures in single expansion with a maximum cut-off as low as 35 per cent. The steam passages of the cylinders have been redesigned to produce a better steam flow than that found in previous models. Improved dynamic balancing has been accomplished by special crank arms securely attached to the crankshaft. The crank pins are integral with the crank arms and are provided with separate hardened bushings. Large roller bearings are used on the idler gear and on the crankshaft.

The pistons are made of cast steel and equipped with sectional packing. The crossheads are fitted with renewable wearing shoes. The axle bearing cap is designed to allow the use of through bolts. Principal parts of the valve gear, such as the eccentric crank, eccentric rod and valve rocker, are made from heat-treated alloy steel.

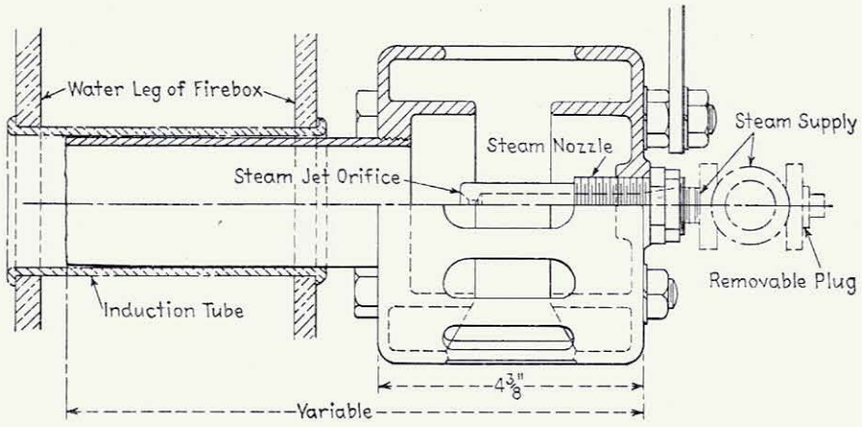
To suit the demand to be imposed upon it, the booster is available in various gear ratios and cylinder diameters from the Franklin Railway Supply Co., 60 East 42nd Street, New York 17.



The type E-1 booster is suitable for service at speeds up to 35 m.p.h., with maximum cut-offs as low as 35 per cent

Smoke Consumer

To meet the increasingly exacting requirements for the reduction of steam-locomotive smoke, and at the same time keep objectionable noise to a minimum, a smoke consumer has been developed by the Wilson Engineering Company, 122 South Michigan avenue, Chicago 3. Smoke is reduced by the aspiration of air through the firebox combustion tubes. Noise is muffled by acoustic filters operating on the principle of the conventional automobile muffler.



The Wilson smoke consumer

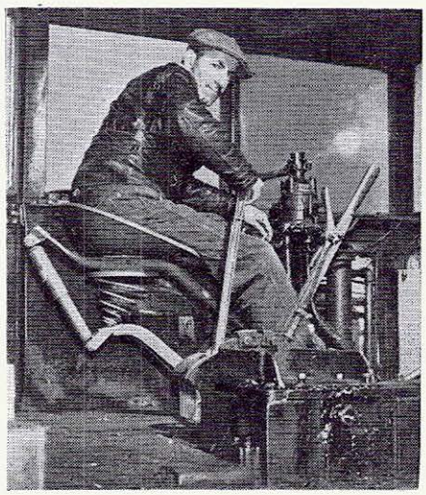
The device is mounted with the air-supply tube extending through the induction tube between the sheets comprising the water leg of the firebox. The air tube is available for fitting induction tubes with diameters of 2, 2½, or 3 in. The jet orifice may be 3/32, ⅛, or 5/32 in., respectively, in diameter. A removable plug fits the steam-supply cross or tee to facilitate cleaning with 1/16-in. hard wire.

To introduce the necessary amount of air into the interior of the firebox, steam is fed to the orifice from the outside through a ½- or ¾-in. cross or tee. The action of the steam flowing through the jet entraps the air and imparts to it a velocity head to force it into the firebox, where it contributes to more nearly complete combustion. To suit varying conditions the steam nozzle is adjustable longitudinally up to ½ in. A locomotive set comprises from four to six of these individual devices.

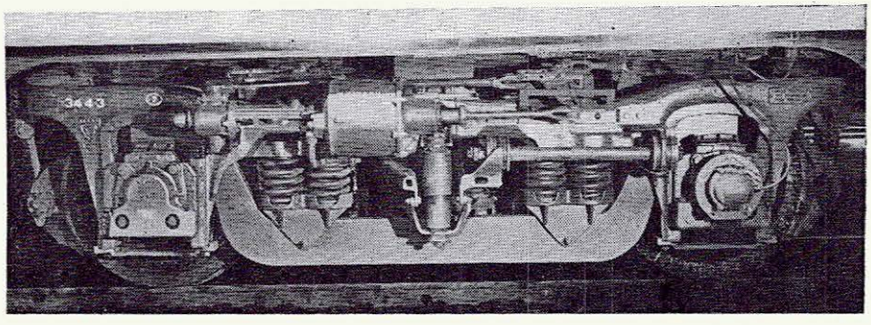
Two Applications of Shock Absorbers

Two new applications of hydraulic shock absorbers, made by the Monroe Auto Equipment Company, Monroe, Mich., are shown in the illustrations.

The first of these indicates the type of spring suspension and post-war Monroe direct-action shock absorbers used on trucks of the new Chicago & North Western "400" streamliner cars, recently built for this railroad by the Pullman-Standard Car Manufacturing Company.



Monroe easy-ride seat installed in a North American Corporation gasoline switcher



Stem-end mounting of Monroe hydraulic shock absorber on new C. & N. W. "400" car truck

The illustration shows a new stem-end mounting of the shock absorbers. Improvements in the shock absorbers themselves include a heat-resisting synthetic seal in addition to the standard leather seal to give a leak-proof bushing; plated piston rods to give micro-dimension bearing surfaces; honed pressure tubes; stronger welds; and extension of the shock absorber shield to give additional protection against flying cinders and dust.

Another new application of Monroe equipment is the hydraulically controlled easy-ride seat for locomotive switchers which is shown applied in the cab of a 25-ton gasoline locomotive at the Blue Island, Ill., yards of the North American Car Corporation. Combining the action of double-action, hydraulic shock absorber, variable-rate spring and sway bar, this seat tends to smooth out the jolts and jars of switching locomotive operation for the engineman. The action is similar to that in Monroe seats for tractors, trucks, speed boats and other vehicles. The shock absorber controls the spring action and cushions the ride up and down, while the sway bar reduces side sway.

Passenger-Car Air Springs Tested

An experimental application of air springs to railroad passenger-car trucks, which may lead to revolutionary changes in truck design, has been developed by research engineers of the Firestone Tire & Rubber Company and the Pullman-Standard Car Manufacturing Company and was given its first public tryout in a demonstration on July 18 over the tracks of the Chicago South Shore & South Bend electric line between Michigan City, Ind., and Chicago.

Used in the experiment was Pullman-Standard's special laboratory car, one end of which was equipped with Firestone air springs and the other with standard steel coil springs. Instruments capable of checking the lightest variations in lateral sway and vertical motion caused by track irregularities were used in the test, which was made at speeds varying from 35 to 90 m. p. h.

The air spring has already been used on airplane landing gears, heavy truck trailers, passenger buses and Bofors anti-aircraft gun carriers. It also has been tested on passenger automobiles, for which it is claimed to be superior to conventional steel suspension systems. Hope is expressed that the air spring may do for railroad passenger cars what the balloon tire accomplished in the way of increased comfort and riding ease for the automobile.

The air spring used in the railroad test car may be compared to an automobile tire lying on its side. Inflated, it is connected to an air reservoir and acts as both spring and shock absorber. When the tire-like bellows is compressed by a wheel hitting a track irregularity, air is forced into the reservoir. The rebound is then snubbed by a control valve between the bellows and the reservoir, thus minimizing the shock to the car and passengers.

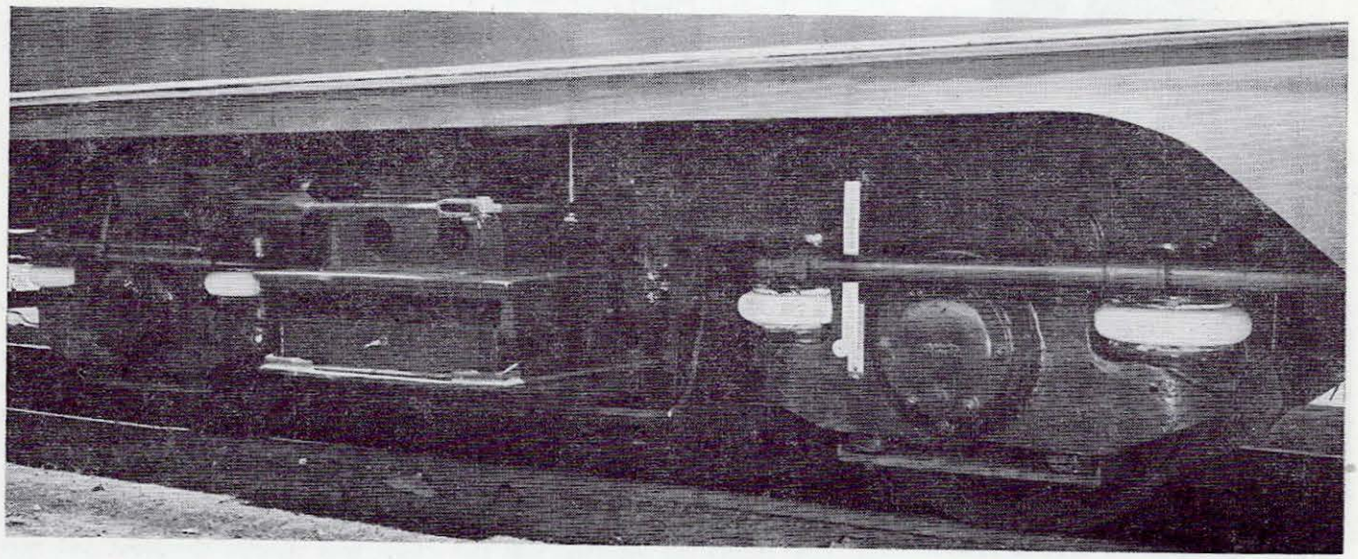
This experimental air-spring truck, like the steel-spring truck commonly used, contains two sets of springs. The journal box springs, which receive the first impact from the rails, consist of two air springs at the end of each axle, both connected to a common air reservoir. The air springs are like a tire approximately 9 in. in diameter and 4 in. high. The other set of air springs is applied, one beneath each end of the truck bolster and connected to an immediately adjoining air reservoir. These bolster air springs are about 20 in. in diameter and 4 in. high.

On Pullman-Standard's laboratory car, the air springs are inflated from an outside compressor in the same manner as an automobile tire, the pressure varying from 75 to 100 lb. per sq. in., dependent upon the load to be carried. Separate compressor units are possible in the final development.

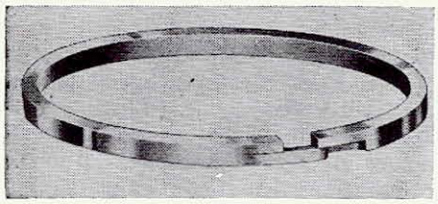
It is expected that the new air spring will be equal, or superior, to the coil spring in maintenance cost and durability, as well as performance. The present air spring is still definitely in the experimental stage, however, and many test runs over a period of several months and a variety of operating conditions will be required before worthwhile conclusions can be drawn regarding it.

One-Piece Double-Seal Ring

A single-piece sealing piston ring has been designed to eliminate blow-by and its destructive action through a construction which is said to seal both the cylinder wall and the ring groove at the joint of the ring. This two-way seal is effected by a sealing tongue which extends across the gap and fits into an accurately machined recess on the opposite side of the gap. The tongue is fitted in an annular groove and is so bonded to the main body of the ring as to be flexible.

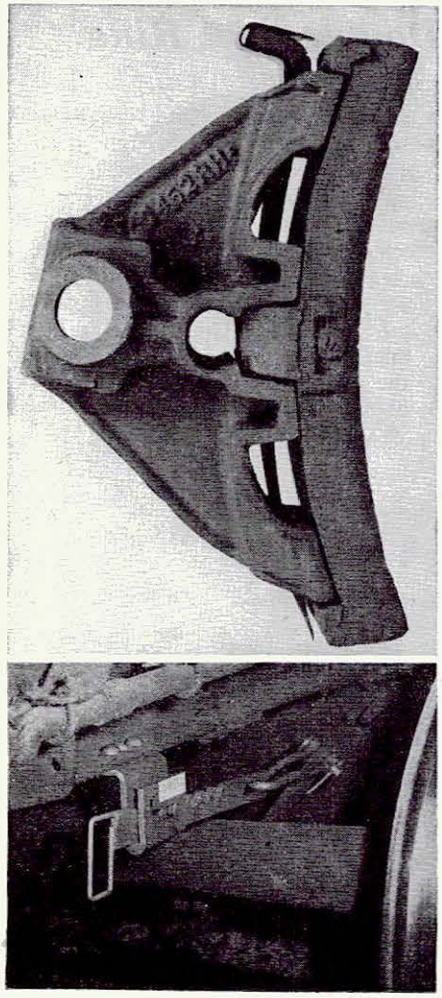


Pullman-Standard test car truck equipped with Firestone air springs instead of steel springs at journal boxes and bolsters

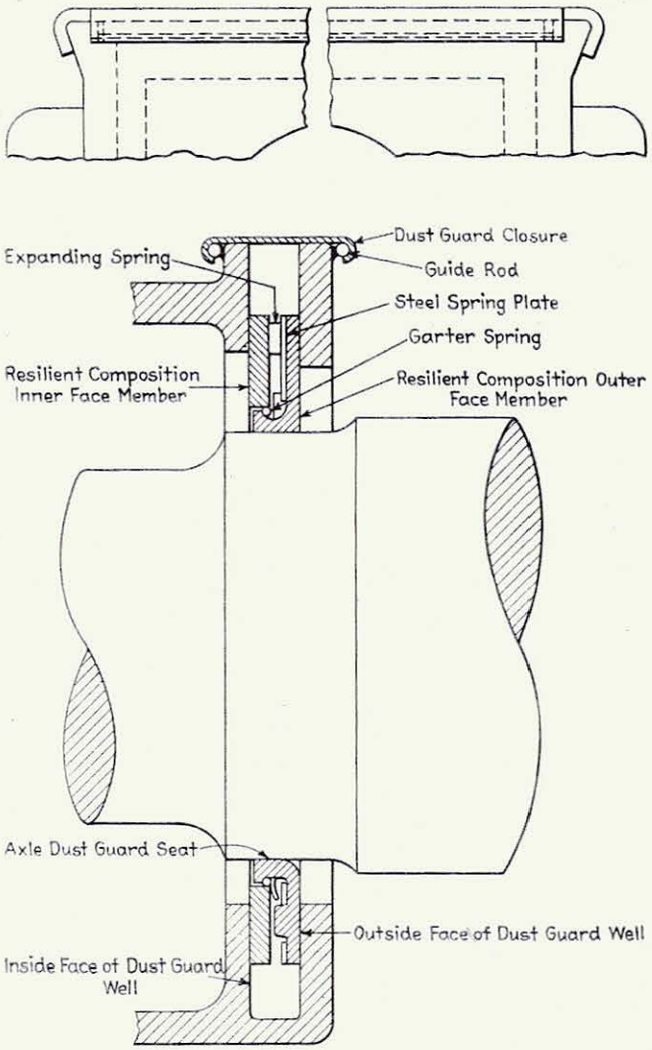


The Hunt-Spiller double seal ring

Gases which would normally flow in a direct line between the cylinder and the piston through the gap in an ordinary ring are blocked by the portion of the tongue that covers the gap. The gas which flows over the top and into the space behind the ring is said to be unable to escape below the ring because the gap in the ring is also sealed at this joint by the tongue. These one-piece double-seal rings are made to the same cross section as plain rings and are interchangeable with plain rings. They are made of Hunt-Spiller air furnace gun iron, and are available for Diesel, steam, gas, and air applications from the Hunt-Spiller Manufacturing Corporation, South Boston, Mass.



Amweld equipment for braking systems —Above: The brake-shoe key retainer— Below: The Type T slack adjuster



Construction details of the Amweld expanding dust guard and dust-guard closure

Brake Equipment

Two items for use on car braking systems have been developed by the American Welding and Manufacturing Co., Warren, Ohio. The Amweld brake-shoe key retainer is a simple steel device to prevent the dislodgement of brake-shoe keys due to the normal chattering of brake shoes caused by the toggle action which exists in the conventional, hanger-suspended brake-beam application, as well as to prevent loss of keys when cars are turned over on a car dumping machine. The retainer is furnished flat. The T head is placed in position in the recessed brake head, and the end bent over the key angle to hold the key in place.

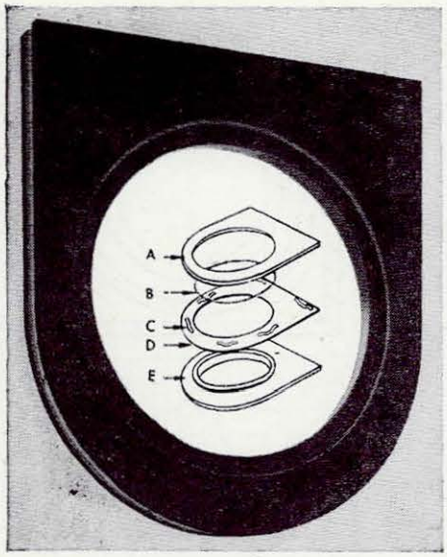
To improve the distribution of forces and to eliminate the swiveling of trucks from brake applications, the Amweld Type T slack adjuster has been developed. This device is designed for quick, simple adjusting of brakes without the necessity of having a man under the car. Withdrawal of the adjuster handle takes up slack as the pin rides up into the angle slot. Releasing the handle drops the pin into a new tooth, and automatically gives the necessary slack-off.

The use of this adjuster is said to reduce the end thrusts of journals, and the accompanying breakage of journal bearings and concentrated loads on journals which can cause hot boxes. In addition, the downward thrust on the brake beam of the conventional dead-lever guide due to movement of the bolster is lessened.

Expanding Dust Guards

Amweld dust guards are designed to exclude dust and moisture from car journal boxes and to conserve the lubricant by their oil-retaining action. The guard has four component parts: two synthetic composition face plates, a steel spring plate, and a garter spring.

In operation a two-way seal is provided. The spring plate maintains pressure against both face plates, which in turn bear against the front and back faces of the dust-guard well. For seal-



Amweld expanding dust guard with insert showing: *A* inner face member, *B* garter spring, *C* expansion spring, *D* steel spring plate, and *E* outer face member

ing against the axle, the plastic characteristic of the resilient face-member compound is utilized. At operating temperatures, the J-shaped axle sealing lip becomes plastic and provides a seal due to the tendency of the lip to align itself with the main body. At all other times the garter spring assures a positive seal.

Further protection against the entry of foreign matter can be obtained by Amweld dust-guard closures. These simple sheet-metal stampings have projecting ends which may be clamped down over closure lugs or straight sidewalls of the dust-guard well. Dust guards and dust-guard closures are available from the American Welding and Manufacturing Company, Warren, Ohio.

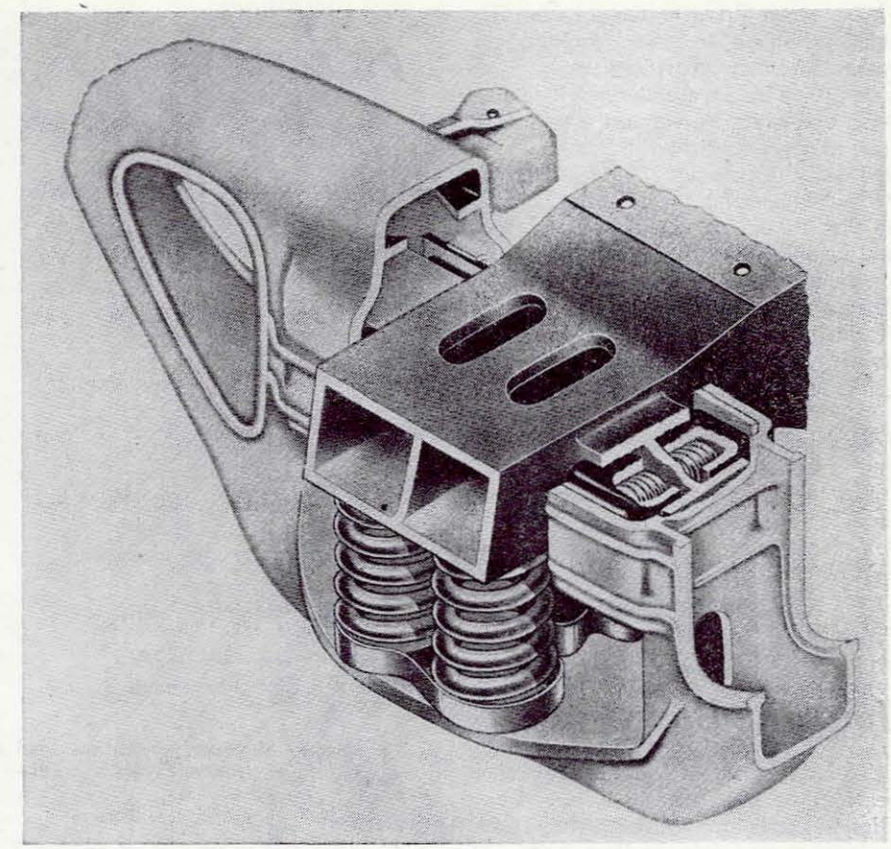
Freight Car Truck

The Scullin L-V truck is said to cushion and control both lateral and vertical motion, thereby helping to maintain constantly controlled truck alinement and reduce lateral impacts and lateral journal stresses. Lateral motion is resiliently cushioned by the built-in lateral springs which function between the side frame and the bolster. Vertical motion is cushioned and controlled by snubbing elements actuated by the lateral springs. Variable or constant frictional snubbing can be provided to control the action of the load-bearing springs.

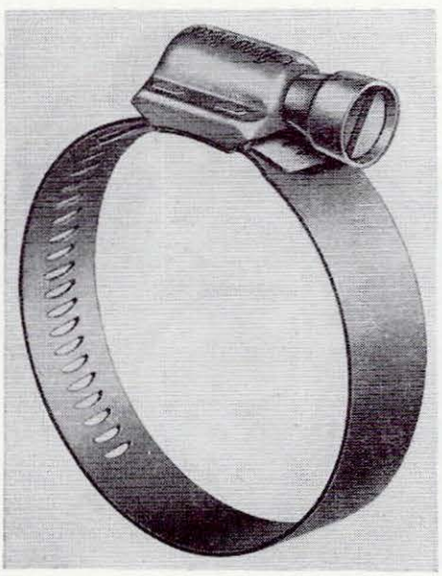
The lateral box-shaped spring housings are cast integral on each side of the bolster at the side frame location, and a vertical partition divides each housing into two sections for spring seats. The lateral coil springs are placed in each section, seated in a fixed position. Friction snubbing caps over the ends of the springs are inserted into the open end of the housing section and move freely in a lateral direction. Their outer surfaces contact hardened steel wear plates, applied on the inner surfaces of the side frame column flanges.

To assemble, the lateral springs and friction caps are inserted into their housings, and a standard bolt is applied laterally through the caps to compress the lateral springs sufficiently to permit the bolster to enter the side frame. The bolster is then raised to a position that will allow the removal of the assembly bolts, and the truck is assembled in the conventional way. To dissassemble, the bolster is raised enough to remove the vertical springs, and then lowered sufficiently to apply the assembly bolts.

The L-V trucks are manufactured by the Scullin Steel Company, St. Louis, Mo. Their weight is comparable to that of a conventional truck, and roller bearings can be applied if desired.



Cutaway view of the Scullin L-V truck showing the lateral and vertical control assemblies



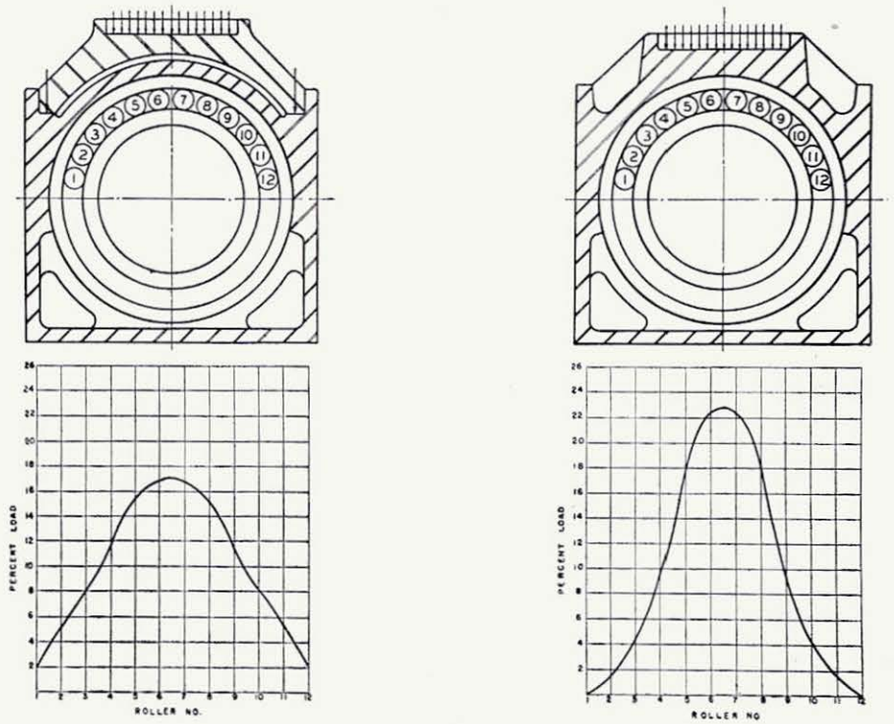
Aero-Seal hose clamps have a worm drive

Worm Drive Hose Clamps

Originally designed for aircraft, Aero-Seal hose clamps use a worm drive to give fast and tight clamping. A special 10-pitch hardened-steel worm engages perforations in the band to produce a true tangential pull which is said to provide a belt-like tightening action and uniform clamping pressure all around the hose. The possibility of leaking is diminished by the uniform peripheral pressure which reduces cramping and pinching.

The worm-drive principle also permits the band to come through the worm housing, providing extra long take-up. This is useful on self-sealing hose, and gives lee-way on any type of hose to cover variations in hose diameter and wall thicknesses. The band may be backed completely out of the housing so that the clamp can be sprung open and installed over the hose in place. As the housing is compact, the clamp will fit in cramped locations. The worm is retained at all times by the riveted-on housing, eliminating loose parts.

These hose clamps are manufactured by Aircraft Standard Parts Company, 1711 Nineteenth avenue, Rockford, Ill., and are available in diameters from 7/16 in. to 4½ in., cadmium-plated spring steel for ordinary uses, or stainless steel for places subject to heavy corrosion. Worm ends can have either a screwdriver slot or a thumb grip.



Graphs showing percentage load concentrations—Left: on a saddle-equipped journal box; right: on a conventional journal box

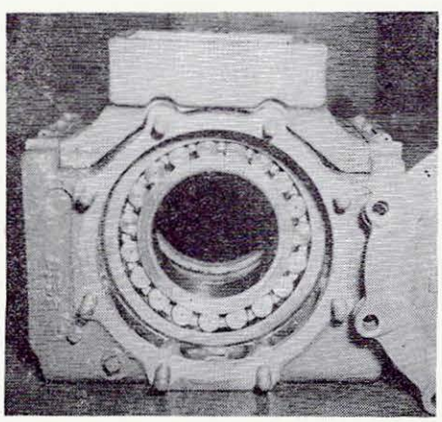
Journal Box

To increase the life of spherical roller bearings on passenger cars, electric or Diesel-electric locomotives, and on steam locomotive tenders or trailers, a journal box has been designed by S.K.F. Industries, Inc., Front street and Erie avenue, Philadelphia 34, Pa., which is said to eliminate the usual concentration of forces at the top center. A steel arch, or saddle, fits in a machined recess in the top of the box, and applies the load at the sides in equitable distribution.

A series of studies by S.K.F. led to the overall design of this journal box. The decision to use a two-bearing mounting was the result of a previous analysis which showed that such mounting utilized more of the effective length of the journal, weighed less per journal, and did not require as large an outside diameter as the single-bearing housing. It was further noted that the bearing's self-aligning properties accommodated the shaft deflection without disturbing the proper distribution of the load between the races and the rollers. At the same time, however, it was recognized that the journal box itself is subject to elastic deformations which, unless properly provided for, will result in load concentrations harmful to bearing life.

To combat the concentration of load, the steel arch was devised and incorporated into the design of the bearing to avoid the deformation of the top half of the box that results from service loads. This deformation, in turn, caused the load to be carried on the top 20 per cent of the roller complement; thus, as the rolling elements rotated about the inner ring, the load was carried only for a small portion of the time on the few rollers directly on top. Since the life of an anti-friction bearing is approximately inversely proportional to the cubic mean of the loads on the rollers, any reduction in the maximum roller load through a more uniform distribution should result in an increase in bearing life. With the top section relatively flexible, the maximum load was said to be reduced by about 25 per cent. Endurance tests conducted with the saddle-type box indicated an increase of approximately 33 per cent in bearing life. It is claimed that strain gage measurements showed that the stress in the box did not exceed 6,000 lb. per sq. in. under normal service conditions.

As the saddle is a separate piece, it can be varied to fit a wide range of spring rigging arrangements, thereby, it is said, reducing the inventory of spare wheel and axle assemblies which railroads must maintain. Without disturbing the bearings or the housing it can be used interchangeably on 4- or 6-wheel trucks with coil springs, single or double equalizer suspensions. Wheel-slip devices, train-control speedometer drives, speed governors, and electrical or chemical hot box alarms can be applied without any changes in design.



S. K. F. saddle-equipped journal box

Self-Regulating Generators

Self-regulating generators for standby or emergency Diesel-electric power plants are now being offered in 7.5- and 10-kva. sizes by the Witte Engine Works, Kansas City, Mo. No rheostat is required and the control has no moving parts.

The voltage output of the generator is regulated within narrow limits by varying the exciter voltage input to the generator electrically. Near-resonant reaction from a magnetically saturated reactor connected in series with a capacitor provides an a.c. voltage that amplifies small changes in generator voltage.

This a.c. voltage is rectified and combined with the input voltage of the exciter to hold the generator voltage within 2 per cent plus or minus from no load to full load. It also compensates for voltage changes caused by variations in speed of the engine. No tubes or other delicate parts are required.

GENERAL NEWS

Seaboard Air Line Receivership Ends

New company takes control of property August 1, with Powell president

Operation of the Seaboard Air Line under corporate management was resumed August 1, when the Seaboard Air Line Railroad Company assumed control of the properties of the bankrupt Seaboard Air Line Railway Company, thus terminating the receivership which had its inception in the 'Thirties.

Officers of the new company are: Henry W. Anderson, chairman of the board of directors; Legh R. Powell, Jr., president; R. Parke Jones, vice-president, in charge of finance, accounting and secretarial matters; George B. Rice, vice-president, with jurisdiction over freight traffic, express traffic and industrial and agricultural development matters; W. R. C. Cooke, general counsel; Harold J. Gallagher, general counsel; L. L. Knight, comptroller; W. B. Pope, treasurer; and W. F. Cummings, secretary.

In addition to the chairman and the president, the new directorate is composed of Fred G. Boyce, Jr., Baltimore, Md.; Henry C. Breck, New York; William H. Coverdale, New York; B. M. Edwards, Columbia, S. C.; Henry C. Evans, Baltimore, Md.; Joseph France, Baltimore, Md.; Otis A. Glazebrook, Jr., New York; Frederick N. Harrison, Richmond, Va.; Samuel H. Husbands, Washington, D. C., and San Francisco, Calif.; Robert Lassiter, Charlotte, N. C.; Joseph T. Lykes, Sr., Tampa, Fla.; Robert Meyer, Birmingham, Ala.; William Murphey, Savannah, Ga.; Edward C. Roe, Jacksonville, Fla.; Henry O. Shaw, Miami, Fla.; and Eugene W. Stetson, New York.

Receivership Began in 1930—At the time the new company took over operations, Legh R. Powell, Jr., and Henry W. Anderson were acting as receivers under orders of the federal courts for the Eastern District of Virginia and the Southern District of Florida.

The Seaboard system represents the merger and consolidation over the years of many smaller roads. Parts of the Seaboard are considerably more than a hundred years old and are linked with the earliest beginnings of rail transportation in America. The system was from time to time expanded to serve new territory and, at the time of receivership on December 23, 1930, included the mileage now taken over by the new company.

The long depression prevented earlier attempts to reorganize the properties and return them to corporate management. Tazewell Taylor, Norfolk attorney, was appointed special master, to report upon a plan of reorganization. With certain minor changes the plan as submitted by him on July 20, 1943, was approved by the courts and has been accepted by 97 percent of the security holders. Various appeals delayed the consummation of the plan but the Interstate Commerce Commission's report and order of June 28, 1946, approving the issuance of new securities and authorizing the acquisition by the new company of the properties of bankrupt company finally cleared the way for the completion of the reorganization.

The new system embraces approximately 4,200 miles of road in the states of Virginia, North Carolina, South Carolina, Georgia, Alabama and Florida. The region traversed includes some of the most productive portions of the South, among which are important vegetable, cotton, tobacco, citrus fruit and lumber areas, as well as important manufacturing and distributing centers. Recent years have witnessed unusual development in manufacturing lines, notably in pulp and paper, textiles, citrus canning and chemical industries, throughout the territory served by the Seaboard.

The interest held by the old company in various subsdiary companies also passes to the new Seaboard Air Line Railroad. Its principal office will be in Norfolk, Va.

"I am highly gratified that the reorganization of the Seaboard has now been effected and the properties returned to operation under corporate management", Mr. Powell said as the receivership ended. "The management of any receivership estate is, of necessity, confronted with certain restrictions which are not inherent in private operation, and I am sure that the removal of those restrictions imposed by the receivership will have a highly beneficial effect upon the Seaboard's ability to project even further the program of transportation leadership that has characterized its efforts in the past," he continued.

No Policy Changes—Mr. Powell said no change in policy is contemplated under the new setup. He amplified this statement by reciting some of the accomplishments of the road even during the trying years of receivership, saying that the Seaboard was the first railroad in the South to adopt such innovations as air-conditioning of passenger equipment and the use of Diesel-electric locomotives in road service.

"We have on the Seaboard a most efficient, loyal organization," he added. "The emergence from receivership will provide an added incentive for all of us to improve and enlarge upon our service to the public. There will be no deviation from our long established policy of operating in the man-

(*Continued on page 193*)

Present Rates Mean Less Employment

Railway executives tell I. C. C. of deficits incurred as costs keep rising

Hearings before a panel of the Interstate Commerce Commission at Chicago, in the railways' application for a general increase in freight rates, docketed as Ex Parte Nos. 148 and 162, continued throughout last week, with railway officers reporting operating deficits during the first six months of 1946 and describing their efforts to meet increased costs.

Most of the opposition to the rate increase appeared to come from various federal and state government agencies, although certain shipper groups warned the railroads of probable losses of traffic to truck lines, pipe lines and water carriers should their rates be increased. Opening sessions of the hearing were reported in *Railway Age* of July 27, page 140.

Much shipper testimony was heard by examiners at "side show" hearings which coincided with that before the commissioners. At one of these C. E. Widell, representing a group of Tennessee shippers, suggested that railroad rates in the South were exceptionally favorable and recommended that the commission "give most careful consideration to the revenue needs of the carriers." Another feature of the main hearing was the presentation by a witness for the Office of Price Administration of a proposal for a rate of return theory which he admitted would bankrupt nearly all carriers if it were adopted and his recommendation that the commission fix rates to yield a return of approximately 3¼ per cent.

Betterments Require Capital—At the hearing on July 23, R. L. Williams, president of the Chicago & North Western, said that the North Western's wage bill for 1946 will be $33 million higher than it would have been had wage rates been unchanged since 1940. During this same period payroll taxes have increased nearly $2 million annually, while the cost of materials and fuel has risen by $6.8 million a year. The total annual increase to be absorbed by the C. & N. W., based on 1946 operations, will be $41,990,000, which must be balanced against a 10 per cent increase in passenger fares previously granted and a $2,973,000 increase in freight revenues granted recently, which had it been in effect the full year would amount to $5,410,000 for the year.

Considering 1941 traffic as the level which the railways might expect in the future, Mr. Williams said that had 1946 wages and material and fuel prices been effective then, the North Western's net railway operating

income of $19 million in 1941 would have been converted to a net railway operating deficit of nearly $11.5 million. "Short of a reduction in the present wage and material costs, the situation can only be met through an increase in freight rates and an improvement in efficiency," he declared. "To accomplish the latter will require the expenditure of a very large amount for capital improvements. Benefits attainable through improved efficiency will have to come gradually and within the next few years will result in offsetting only a small part of the increased operating expenses which I have just mentioned."

P. J. Neff, chief executive officer and president of the Missouri Pacific, followed Mr. Williams as a carrier witness. Mr. Neff stated that the wage index on the M. P., using 1940 as a base, was 129.2 in 1944, 129.8 in 1945 and 155.9 at the present time, while the index of materials and supplies was 134.4 in 1945 and 152.4 in 1946. He estimated that operating expenses for 1946 will be increased over $22 million by increased wages and material costs, whereas the estimated increase in freight rates will add only $4.5 million to revenues.

Deficit Indicated on S. P.—Vaile S. Andrus, assistant to the president, Southern Pacific, told the commissioners that although there had been no change in the general level of rates since 1940, except a 10 per cent increase in passenger fares, wage increases this year had amounted to $51.7 million annually on his road, based on present employment levels, while increased prices of fuel and supplies had added an additional $11.2 million annually to operating expenses. By contrast the results of a five year debt retirement program had resulted in savings of annual interest costs of only $12 million, while the recently granted increased freight rates will produce only $15.5 million per annum. If the 1941 and 1943 wage adjustments are also considered the increased wage bill amounts to $106.5 million annually, exclusive of payroll taxes.

Mr. Andrus said that for the first five months of 1946, net income of the S. P. amounted to $5,924,000, but that $13,508,000 in federal tax credits were included in that figure, so that in reality the results for the period were a net deficit of $7,584,000. For the year 1946, he estimated that the road would have net income of $25.1 million, including tax credits of $41.7 million, so that, but for tax credits, results this year are expected to show a deficit of $16.6 million. Apart from tax credits he expects the road to fail to earn its operating expenses by $1.8 million this year, while for 1947, at present wages and rates, an operating loss of $5.5 million is expected if no allowance is made for federal tax credits.

He estimated that the increased changes sought would yield about $73.4 million additional revenues to the S. P. annually, and with a continuation of present passenger fares, would produce a net railway operating income of $36.7 million in 1947, or an equivalent return of 3.6 per cent upon the value of the road's properties for rate-making purposes.

F. W. Brown, vice-president-operations, Atlantic Coast Line, followed Mr. Andurs as a carrier witness. He estimated that the recent 18½ cents an hour wage awards had added $13.7 million annually to A.C.L. operating costs, including payroll costs, against which there are estimated increases in annual revenues of $4 million, if all states concur in adjusting intrastate rates. For the first five months of 1946, he said that the Coast Line had a net railway operating loss of $366,931, compared with a net railway operating income of $4,739,527 in the same period of 1945. Corporate results for the same period showed a deficit of $112,165 in 1946 against a net income of $5,828,489 in 1945.

A. C. L. Reduces Forces—Mr. Brown told the commissioners that as a result of increased expenses and declining revenues, the Coast Line had reduced forces in the locomotive department by 1,309 men, or 36 per cent, and in the car department, by 754 men, or 29 per cent. On July 1, an additional 500 shopmen were laid off. In the maintenance of way department a force reduction of 1,100 employees was made on July 1, and on August 15, the work of certain contractors engaged in roadway rehabilitation work will be terminated. He described all of the work formerly done by these men as necessary, but asserted that the postponement of this work was necessary until additional revenues are available.

H. M. Johnson, executive assistant of the Missouri Pacific, testified with respect to increased earnings expected to result from the elimination of the land grant deductions. He estimated that in the calendar year 1947, railway freight and passenger revenues will be increased by $40 million as a result of the elimination of land grant deductions applicable to traffic of the armed forces.

H. T. Bradley, valuation engineer, Missouri Pacific, testified that the aggregate valuation of Class I railroads, for rate making purposes, found by the commission earlier in this case to have been $19,571 million on January 1, 1945, is too low in that it does not give any effect to the increase in price levels since 1937. He stated that railroad construction indices, based on 1910-1914 as 100, stood at 153 in 1937, 201 in 1944, and 209 in 1945 and that using the average construction costs for the period 1940-1944, the present valuation should be $22,164 million. By using the 1945 price index the value would become $23,899 million, he said.

Glenn F. Vivian, manager of the Statistical bureau of the Western Lines, appeared as the final carrier witness for the day, presenting statistics showing population densities of the various states and territories, relative railway mileages in the territories, farm income, values of farm and manufactured products, the relative importance to the railways of traffic in farm products and of manufacturers, and various statements as to railway operating results in the various territories. He also stated that the cost of ice used by the carriers in protective service averages $5.39 per ton against $4.15 per ton charged the shippers for ice. The aggregate revenues to the carriers from the furnishing of ice were shown to be $27 million as against a total cost for ice furnished of $34.3 million.

Debt Reduction Hampered—Wayne A. Johnston, president of the Illinois Central, appeared as the initial witness at the primary session on July 24, and told the commissioners that the wage bill of the I. C. had been increased $40.5 million annually, based on 1946 employment, since 1940, while material costs had increased nearly $11.7 annually. To offset this there has been granted increased rates amounting to about $8.3 million a year. He charged that continuance of present costs and rate levels endangered the program of debt reduction.

Mr. Johnston presented figures to show that on the I. C. freight operating expenses, which amounted to 5.576 mills per ton-mile in 1940, had fallane to 5.066 mills per ton-mile in 1944, then rose to 5.716 mills in 1945 and to 7.059 in the first six months of 1946, or 27 per cent above the level prevailing in 1940. He attributed this rise to the increases in prices and wages during that period and asserted that further increases in cost are in sight.

"If the Illinois Central is now required to revert to the starvation diet of the thirties, the result will be to jeopardize not only its ability to maintain the kind of transportation service which this country now needs, but to jeopardize the Illinois Central's ability to maintain itself in such a way that it can again respond to the needs of a great national emergency," he declared. "Upon the outcome of this case, as I see the facts upon our own property, depends the ability of the Illinois Central to make the contribution it ought to make to our own national economy and our system of free enterprise."

Operating Loss on B. & O.—Roy B. White, president of the Baltimore & Ohio, followed Mr. Johnston. He testified that

Washington Hearings in Rate Advance Case

The Interstate Commerce Commission has assigned the Ex Parte 162 and reopened Ex Parte 148 proceedings wherein the railroads are seeking a general freight rate increase of 25 per cent for rebuttal hearings at Washington, D. C., on September 4. The notice also said that oral argument would follow on September 9, the hearings to be before Division 2 and the argument before the entire commission.

Another notice announced that the hearing previously assigned for August 12 at Galveston, Tex., had been transferred to Houston where it will be held on the same date at the Rice hotel. These Houston sessions will embrace also the Railway Express Agency's Ex Parte 163 application for increased rates and charges.

The notice announcing the Washington hearings said that they "will be confined to rebuttal testimony except by agreement, or except for extremely good cause shown, or as may have been arranged or reserved during the previous hearings." The notice also included the following underlined paragraph: "Parties having common interests must arrange to consolidate their presentations both of evidence and of arguments and all duplication or cumulation of evidence must be avoided."

during the first six months of 1946 the B. & O. had operated at a net deficit of $16.7 million, in spite of the fact that operating revenues for the period were at an all-time high for peacetime. Had July 1 rate and cost levels been in effect during that period, the B. & O.'s net deficit would have been $12.6 million. He said that for the B. & O. the emergency increases authorized had amounted to about 7 per cent and that merely to come out even, an additional 11 per cent increase, or a total increase of 18 per cent, was necessary, which would cover fixed charges, but still leave nothing for improvements or for stockholders.

Mr. White said that in order to hold this deficit at a minimum, the B. & O. had made force reductions during the first six months of the year equivalent to 10,431 full-time positions, of which 7,672 were in maintenance. In response to a question by Commissioner Aitchison, Mr. White said that in his opinion passenger fares in coaches will have to be reduced, but that he could not at this time say how much or when. For the present he said that the roads desired the right to retain existing passenger fares until they feel it desirable to make reductions.

J. C. Gutsch, freight traffic manager, rates and divisions, Chicago, Rock Island & Pacific, who was heard as a carrier witness, asserted that in his opinion the rates on grain can be increased as much as 25 per cent, as proposed, "without diverting a substantial amount of this traffic" to other carriers. G. A. Hoffelder, assistant general freight traffic manager of the Chicago, Burlington & Quincy, asserted that the preferred rates on livestock resulting from the Hoch-Smith resolution were no longer justified and that this traffic should take the full 25 per cent increase requested.

"Depressed" Rates Protested — At the primary hearing on July 25, Chester C. Thompson, president of the American Waterway Operators, Inc., appeared as the day's initial witness, telling the commissioners that the barge lines, like the railroads, were in need of additional revenue and were requesting similar rate increases. Mr. Thompson objected to the exceptions to the general increases included in the railroad's petition in Ex Parte 162, characterizing them as "unfair to the other types of transportation."

He asserted that these exceptions are a continuation of a campaign on the part of the rail carriers to institute at every possible opportunity depressed rates. In response to a question by Commissioner Aitchison, Mr. Thompson said he would look with favor on the establishment of both minimum and maximum rate orders affecting both the rail and the water carriers. He insisted that the commission should order the railroads to raise the level of rates that were "depressed for the purpose of meeting water competition."

Passenger Fares — H. W. Siddall, chairman of the Transcontinental and Western Passenger Associations, presented the railroads' principal arguments for a continuation of the present level of basic passenger fares, which are scheduled to be reduced 10 per cent six months after the legal termination of World War II. Mr. Siddall said that since 1936, when the present basic passenger fares, except for the temporary wartime increase of 10 per cent, became effective, the carriers' costs of operation had increased substantially, particularly because of four general wage increases. He asserted that, to the greatest extent possible, passenger service should contribute towards meeting the added operating costs of the roads. He said that the tremendous wartime growth of passenger traffic and revenues contributed in large measure to the roads' ability to absorb these increased costs. They earned a net passenger operating income of $234 million in 1944, compared with a net passenger operating deficit of $226 million in 1941. In 1945, he said, because of increased expenses and a $95 decline in gross passenger revenues, net passenger operating income had fallen by $220 million.

Summing up the carriers' position with respect to passenger fares, Mr. Siddall said: "The chief traffic officers are fully aware that the competition for passenger traffic in the future will be intense and they realize that they must maintain passenger fares on the lowest possible basis consistent with the service necessary to produce a volume which will contribute toward their net revenues. The traffic officers feel that the present fare structure will accomplish this objective, and that the uncertainty with reference to the fare structure, brought about by the limitation now attached to the present fares, should be removed, thus leaving the carriers free to adjust their fares either upward or downward, as the conditions in the future may require."

At the main hearing on July 26 the panel heard testimony concerning the basis for the estimates by individual roads of their probable traffic during the remainder of 1946 and during the year 1947, which data were used by Dr. Parmelee in making his estimate of future traffic levels of all Class I railways. E. Rigg, assistant freight traffic officer, Chicago, Rock Island & Pacific; Joseph Marks, assistant freight traffic manager, Southern; J. C. McGohan, assistant freight traffic manager of the Baltimore & Ohio; H. C. Hallmark, freight traffic manger, rates and divisions, Southern Pacific; J. P. Patterson, general freight traffic manager, New York Central; E. C. Nickerson, assistant general traffic manager, New York, New Haven & Hartford; and J. S. Sheppard, assistant vice-president-traffic, Illinois Central all testified in this respect.

O. P. A. Forecasts Rail Profit—The final witness for the day was Jacob L. Mosak, representing the Office of Price Administration, who said that his studies indicated that for 1946 gross revenues of Class I railways will amount to $7,680 million, compared with Dr. Parmelee's estimate of $7,270 million, the major difference being in freight revenues, which he thought will be $400 million above Dr. Parmelee's figure. Dr. Mosak estimated that operating expenses for 1946 will total $6,105 million. Net income, he said, will total $1,575 million, and net railway operating income before federal income taxes, $925 million. Net income, he estimated, will total $570 million for the year before taxes, as compared with Dr. Parmelee's estimate of $32 million for the year. The OPA figure, he said, represented a rate of return of 4.7 per cent on the investment of $19,571 million held a reasonable valuation by the commission in its June 20 decision. To yield a 5 per cent rate of return an increase of 1.6 per cent in freight rates will be needed, 3.2 per cent increase to give a rate of 5½ per cent, and a 4.7 increase to produce a 6 per cent return, he said.

O. P. A. on Rate of Return—Roderick H. Riley, director of research, Office of Price Administration, told the commissioners that capital costs as measured by yield on various securities of all types had declined steadily since 1920, which he asserted had been "a very substantial benefit to industry and to railroads." He said that since January 1, 1944, railroads had refunded over $2 billion of mortgage debt, thereby reducing their interest rates on this amount of debt from 3.99 per cent to 3.18 per cent, while the new issues were sold at an average price of $999.715 per $1,000 of debt. For the future he forecast a continuation for some time to come of interest rates at about their present levels and held that future refunding operations would act to reduce fixed charges still further.

Mr. Riley asserted that the issue of return has long been associated with the general prevailing rates earned on capital in business with comparable risk, and that a fair rate of return is one that provides a return comparable to that earned in other industries at comparable risk at the same time and in the same region. He said that in 1922 the yield on AAA railroad bonds was 4.74 per cent, on 1¼ per cent below the 5¾ per cent (after taxes) rate of return held to be reasonable by the commission, while the yield on high grade common stocks was 5.8 per cent on a dividend basis and 8.8 per cent on an earnings basis. His calculations showed that in 1946 the corresponding yields were 2.42 per cent on AAA bonds, 3.8 per cent on high grade common stocks on a dividend basis and 6.7 per cent on an earnings basis, the decline being 2 points in the yield on common stocks and 2½ points in the yield on bonds.

The Railroads' First Need

Since the railroads have no resources for buying new equipment, it is reported that the government may shortly finance the production of 50,000 box cars through the R.F.C.

But making the railroads run more deeply in debt is not the answer to their pressing problem. Fair freight rates, such as they have not known in a long time, should be granted by the Interstate Commerce Commission. The recent increase took small account of the rising costs of everything the roads have to buy and ignored the big boost in wages calling for retroactive payments.

The nation's railroads are the keys of industry. Unless they are free to do their part reconversion will be halted.

According to O.D.T., the worst crisis will occur next month unless prompt measures are taken to avert it. The country will be lucky if that crisis can be prevented.

—*The Philadelphia Inquirer*

From this Mr. Riley reasoned that a fair return in 1946, before taxes, should be between 4 per cent and 3¾ per cent, which, on the present basic tax rate of 40 per cent, works out slightly less than 2½ per cent after taxes. He admitted that on this basis, if adopted by the commission, the rate of return, after taxes, would be less than current capital costs, and therefore would not cover these costs for the roads as a whole, holding this condition to be the result of declining capital costs, coupled with a large tax factor.

No New Capital Needed!—In response to a question by Commissioner Aitchison, the O. P. A. witness asserted that since the railroad plant had already been built there is no need for any additional equity capital in the industry, but only for capital for refunding purposes.

Mr. Riley declared that the only solution for this below-cost rate of return was for the I. C. C. to determine carefully the exact return needed by the industry to cover capital costs and then set rates to provide sufficient earnings to cover these costs and taxes. He defended his use of high-grade securities in fixing the rate of return by saying that roads with few or none in this category would then be forced "to put their houses in order." He asserted that all but one of the twenty roads which the carriers had shown to have operated on a deficit basis in 1945 had operated on that basis almost continuously since 1929 and that their difficulties should not be remedied by rate increases, although he admitted that to accomplish this result some of the roads would have to have "no capital structure at all."

Charles E. Bell, representing the state of New York, presented statistics purporting to support the views of that state that the facts do not justify any greater permanent increase on traffic in Official territory than in other regions.

Chester S. Moore, chairman of the board of the Central States Motor Freight Bureau and secretary of the American Trucking Associations, asked the commision to grant the rail carriers a greater increase on l.c.l. traffic than on other freight traffic and requested that it also adjust the railways' allegedly low exception and commodity rates, "low spot" class rates and bulk petroleum rates.

Views of Shippers—In a concurrent hearing before Examiner Burton Fuller representatives of the corn syrup, sand and gravel, brick and tile, clay, pottery, flour and grain products, cement, and meat packing industries explained their attitude toward further rate increases. While these spokesmen for shippers exhibited no enthusiasm for higher rates, most of them conceded the railroads' need for increased revenues. In general they emphasized the importance of existing territorial relationships. H. A. Hollopeter, representing the Indiana Chamber of Commerce, objected to the imposition of the additional 5 per cent increase in Official territory, and asked that it be absorbed in any additional increase the commission may authorize.

Among other representatives of oil companies appearing before the examiner was A. C. Hultgren, traffic manager of the Shell Oil Company, who said that his company does not oppose the railroads' application for authority to increase rates on petroleum, but does object to a proposed increase on shipments in tank cars of 25 per cent, maximum 6 cents per hundred lb., along with a flat increase of 25 per cent on shipments in other containers. This he said would break down commodity groupings in effect many years and disturb rate relationships of long standing. He also urged the commission to order the same percentage increase on tank car mileage rates as it grants on oil in tank cars.

C. E. Widell, representing numerous Tennessee manufacturers, urged that the commission consider rate relationships as much as rate levels.

"It isn't a question with us academically with our rates," he declared. "Our rates are no more stable than our other production costs, labor costs and so on. They are all in a state of flux constantly, but when we go back before the war and scrutinize the revenue position of our southern carriers and then turn our attention to the post-war period that we are entering, trying to determine traffic flows and revenue returns from our rate structures as we have it today—and by the way, Mr. Examiner, we have a very favorable rate structure in the South, regardless of all that has been popularized about it, so favorable that the industries of the South are fearful that we are going to lose much of the benefits."

Sees Need for Adequate Revenues—Continuing, he said, "It is amazing to me that our southern carriers have been able to function efficiently and to give us sound transportation under such difficult conditions. Take, for instance, the ten years that preceded World War II, from 1930 through 1939. Those were true pre-war years for us. In that period of ten years southern carriers failed by over $81 million to cover fixed charges. There were heavy deficits six of the years. Now, surely we cannot enter a post-war period with a revenue return of that kind and expect that our southern carriers are to maintain for us efficient and sound transportation, so that the duty resting on the commission is a heavy one. It is a burden industry is glad to pass on to the commission to determine what the carriers need."

Among spokesmen appearing for the coal industry was F. F. Estes, traffic manager of the National Coal Association, who said that this association was not taking a definite stand on the railroads' proposals but was asking the commission "to determine where increases can be put that will do the least harm to all concerned—to the railroads as well as to the coal industry."

Mr. Estes stated that in 1940 the rate of return earned by the railroads was 0.8 per cent as against 0.2 per cent for the bituminous coal industry, while in 1943, the last year for which such figures were available for the coal industry, the corresponding rates were 3.7 per cent for Class I railroads and 1.9 per cent for bituminous coal. He stated that 36 coal roads originating 97 per cent of the coal tonnage, during the first quarter of 1945, had net income of $111.8 million compared with $146.7 million for all Class I railways.

Concerning displacement of coal by other fuels, Mr. Estes said that in 1941 the consumption of bituminous coal was about 6 million tons below the level of 1928, while the use of natural gas had more than doubled and consumption of fuel oil had risen by more than 50 per cent. He calculated the 1944 revenue loss to the railroads, by reason of the substitution of natural gas, fuel oil and hydroelectric power for energy derived from coal, as $293 million.

East's 5 Per Cent Draws Fire—Examiner F. M. Weaver heard representatives of many mid-western industries and boards of trade to the general effect that whatever further rate increases might be justified territorial rate relationships should be maintained. I. M. Herndon, manager of the Transportation Department of the Chicago Board of Trade testified that that organization was opposed to the supplemental increase of 5% in Official territory. He contended that products of agriculture produced average revenues per car much higher than the average of all freight and, therefore, should not be penalized with higher rates than on other commodities.

Charles E. Blaine, representing various livestock and cattle shippers, charged that the railroads were not efficiently operated and that, had the consolidation plans published by the I. C. C. in 1929 been made effective, the economies would have been such that the roads would not now find it necessary to seek higher freight rates. He asserted that livestock rates were already unduly high as compared with rates on other traffic and declared that increased rates on livestock would result in revenue losses to the carriers by reason of diversions of traffic to highway trucks. He also complained that the proposed rate increase on wool would widen the spread between rates on domestic and imported wool unreasonably.

F. E. Mollin, executive secretary of the American National Livestock Association, told the examiner that although livestock prices and farm income are at high levels at present, increased costs have reduced profit margins so that farmers cannot afford higher rates on livestock. He asserted that increased rates will encourage de-centralization of the meat packing industry and will drive additional livestock traffic to truckers.

Shows Railroads' Efficiency—John J. Bonebrake, director of formal rate cases of the Kansas Corporation Commission, said that, comparing 1946 with 1926, on the basis of man-hours per 1,000 net ton-miles, the railways can now afford to pay labor approximately twice as much as in 1926, without increasing unit rail labor expenses, which rose, he said, from 63.1 cents per man-hour in 1926 to 109.3 cents in 1946. During this period, he said, fuel costs had increased only 3 cents per 1,000 net ton-miles; maintenance expense declined from $4.84 per 1,000 net ton-miles in 1926 to $3.87 in 1944; and unit cost of materials and supplies, he said, rose by 16 per cent during this time. The unit cost of handling freight traffic was said to have declined from $7.80 in 1926 to $6.44 per 1,000 net ton-miles in 1944 and the cost of fuel, material and supplies from $3.51 per 1,000 net ton-miles in 1926 to $2.31 in 1945. He forecast net total operating

revenues for 1946 of $8,311 million, expenses of $6,694 million and "net revenues" of $1,613 million, compared with $1,714 million in 1926, which he termed a profitable year.

F. P. Aughnay, appearing in behalf of the railroad commissions of the southeastern and southwestern states and also of North and South Dakota, Nebraska and Kansas, testified concerning rates on grain, telling the commission that the railroad proposals would raise the average charges per carload of wheat to Minneapolis from $229.24 on June 30, to $288.06, which is $51.31 over the increase resulting from the I. C. C.'s decision of June 20, which rates became effective July 1. He asserted that the proposed rates on grain would average 31.3 per cent above the rates found reasonable by the commission in Docket 17,000, Part 7, which adjustment resulted from the Hoch-Smith resolution.

Frank B. Townsend, executive vice-president of the Minnesota Traffic Association, asserted that the proposed 25 per cent freight rate increase will "result in the diversion of large tonnage to other forms of transportation" and complained of the rates resulting from the June 20 decision as "compounding" the present disadvantages suffered by Minnesota shippers, by reason of the additional 5 per cent increase in Official territory, which he said resulted from the construction of certain rates to and from the Twin Cities on a combination of Western Trunk Line and Official territory scales.

Says Trucks Would Be Cheaper— L. F. Orr, general traffic manager of the Pet Milk Company, appearing in behalf of the evaporated milk industry, estimated that the proposed 25 per cent increase would add $11¼ million annually to the industry's freight bill, based on 1945 shipments, or 12.9 cents per case of finished goods. So far as his company is concerned, he said that a recent survey showed that it can ship all of its inbound and outbound freight, except coal, by truck and water, at no increase in present costs, and before giving effect to the emergency increases of July 1. This survey, he said, indicated that the increased investment occasioned by the purchase of trucks, would be "moderate" in comparison to the savings that would be affected if rail rates advance further. He also called attention to losses in rail revenue that have occurred as a result of condensing plants substituting oil and gas for coal as fuel when delivered costs of coal became excessive.

C. S. Decker, general traffic manager of the Borden Company, speaking for the Dairy Industry Committee, warned the railroads against "excessive" increases on fluid milk traffic as being likely to drive that traffic to highway carriers, citing the New York milkshed rates as an example of rates that the carriers have been unable to hold at the maximum level authorized by the commission. He characterized the rates on fluid milk as more akin to passenger than to freight rates and asserted that the imposition of the additional 5 per cent emergency increase in Official territory was improper.

E. F. Scott, general traffic manager of the Beatrice (Neb.) Foods Company, appearing for the American Butter Institute and the National Poultry, Butter and Egg Association, asserted that in considering rate increases on butter, poultry and eggs they should be placed in the same category as products of agriculture generally, and warned of the care needed in fixing rates on these products because of their suitability for truck transportation. He also protested the proposal to place a minimum charge of $1 on shipments of fluid milk and cream in freight or passenger service, terming this a "radical departure" from previous practice.

Claim Ore Rates Excessive—On July 27 M. D. Harbaugh, vice-president of the Lake Superior Ore Association, testified at the hearing before Examiner Fuller that present rates on iron ore are unreasonably high and will continue to be so under all foreseeable conditions. He asserted that existing rates produced revenues of $5,308 per loaded ore train, for which a movement of 80 miles loaded and 80 miles empty was required, against average revenue per train in the Northwestern region of $3,047 per haul of 363 miles loaded and 157 empty.

G. H. Shafer, general traffic manager of the Weyerhauser Sales Company and the Weyerhauser Timber Company, testified concerning rates on wood pulp. He objected to a straight percentage increase on this commodity and asked that the commission set a maximum increase in cents per 100 lb. if it grants an increase in these rates. He termed the relationship between the carriers proposed 25 per cent rate increase and their 10 cents per 100 lb. maximum satisfactory and requested that this relationship be kept, if increases of any other magnitude are granted.

George O. Tong, representing the Minnesota Canners Association and the Minnesota Valley Canning Company, asked that the commission make no findings on canned goods in this case. He asserted that at the present time the carriers can increase rates on canned goods without specific authority as they are already below the levels prescribed by the I. C. C., and said that, if the carriers are thus forced to treat canned goods separately, the shippers can then ask a suspension and secure treatment of the case on its own merits.

Says Gas-Turbine Locomotive Is a Practicability

Dr. John I. Yellott, director of research, Bituminous Coal Research, Inc., in his first annual report presented at a meeting held recently at the Hotel Biltmore, New York, pointed out the practicability of a locomotive driven by a gas turbine and powered by pulverized coal. He described the coal-handling system which makes use of the "coal atomizer" to pulverize coal to the necessary fineness, within the limitations of space and weight imposed by locomotives. He also described the use of small cyclone separators to remove 75 per cent of the fly ash from hot gas streams, which, freed from abrasive materials, may then be used to drive the turbine blades.

"The new gas-turbine locomotive," Dr. Yellott said, "will use electric drive. It will be able to operate without a tender and will need no water. It will be considerably more efficient in cold weather than in hot weather." He further stated that "the thermal efficiency of the gas-turbine locomotive at the rails is approximately 20 per cent as compared with the efficiency of the present steam reciprocating locomotive of 5 to 6 per cent."

According to Roy B. White, chairman of the Locomotive Development Committee and president of the Baltimore & Ohio, who presided at the meeting, the committee has authorized the purchase of two full-size gas turbines and of special locomotives in which to mount them.

Freight Car Loadings

Loadings of revenue freight for the week ended July 27 totaled 910,513 cars, the Association of American Railroads announced on August 1. This was a decrease of 10,983 cars, or 1.2 per cent, below the preceding week, an increase of 24,083 cars, or 2.7 per cent, above the corresponding week last year, and an increase of 1,023 cars, or 0.1 per cent, above the comparable 1944 week.

Loading of revenue freight for the week ended July 20 totaled 921,496 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, July 20			
District	1946	1945	1944
Eastern	171,641	161,954	165,839
Allegheny	195,779	194,293	197,432
Pocahontas	64,934	53,492	56,202
Southern	134,122	121,473	123,862
Northwestern	143,196	133,869	140,192
Central Western	143,238	143,709	142,810
Southwestern	68,586	73,658	73,955
Total Western Districts	355,020	351,236	358,957
Total All Roads	921,426	882,648	902,092
Commodities:			
Grain and grain products	63,326	68,553	59,723
Livestock	21,794	13,681	13,970
Coal	190,386	168,982	174,985
Coke	13,585	14,855	14,669
Forest products	50,994	44,014	50,729
Ore	77,856	76,712	84,468
Merchandise l.c.l.	119,622	103,732	102,630
Miscellaneous	383,935	392,119	400,918
July 20	921,496	882,648	902,092
July 13	895,080	883,543	903,901
July 6	679,785	726,663	744,347
June 29	879,545	893,947	897,210
June 26	858,437	876,703	880,311
Cumulative total, 29 weeks	21,512,450	23,771,400	23,835,541

In Canada.—Car loadings for the week ended July 20 totaled 68,173 cars, as compared with 70,076 cars for the previous week and 71,810 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

Totals for Canada:	Revenue Cars Loaded	Total Cars Rec'd from Connections
July 20, 1946	68,173	33,556
July 21, 1945	71,810	34,376
Cumulative totals for Canada:		
July 20, 1946	1,931,367	978,379
July 21, 1945	1,979,844	1,065,958

New North Western Train

Scheduled to provide direct connections with trains running between Chicago and Omaha, Neb., a new streamliner train to operate between Sioux City, Iowa, and Omaha will be placed in service by the Chicago & North Western next year. The train will be similar in design to the North Western's "400" fleet and will consist of

air-conditioned coaches, parlor car and a combination cafe-coach, and will be powered by a 1,000-hp. Diesel-electric locomotive.

While no definite schedule has as yet been worked out, the train will have an early morning departure from Omaha and an afternoon departure from Sioux City. By making connections with another streamliner running between Chicago and Omaha, the train will provide travelers with fast, daytime service between Chicago and Sioux City.

Monon To Use Diesel Power Exclusively

At a luncheon meeting in Chicago on July 29, J. W. Barriger, president of the Chicago, Indianapolis & Louisville, introduced Colonel F. E. Cheshire, who has just been appointed chief mechanical officer of the Monon with primary responsibility for specifying the kind and amount of mechanical equipment required in the extensive modernization program contemplated for this railroad. In the course of his remarks, Mr. Barriger stated that plans are being developed to streamline and completely Dieselize Monon service, both passenger and freight.

Declaration on Transportation Adopted by C. of C.

A total of 14 objectives are sought in a declaration dealing with the nation's transportation policy which has been adopted by the membership of the Chamber of Commerce of the United States, according to the results of a referendum vote announced this week. The policy declarations were based on a recent report of the chamber's Transportation and Communications Department Committee.

As noted in *Railway Age,* June 29, page 1292, the declarations were drafted by the chamber's Committee on Policy and submitted to the membership for approval by its board of directors. The report of the Transportation and Communications Department Committee was prepared in response to the "questionnaire" distributed by the House committee on interstate and foreign commerce as part of its "national transportation inquiry."

To Try New Ticket Sales Plan on the "Pere Marquette"

Passengers on the "Pere Marquette" streamliners between Detroit, Mich., and Grand Rapids, to be inaugurated early this month, will be able to avoid waiting at ticket windows for railroad and seat tickets, according to an announcement by Robert R. Young, chairman of the Chesapeake & Ohio.

Travelers intending to use these all-reserved seat, all-coach trains can made advance seat reservations by telephoning the station or city ticket offices. The ticket and seat accommodations will be entered in the name of the passenger, Mr. Young said, to be picked up and purchased on the train. It will be unnecessary for the passenger to go to the ticket office at all, unless he prefers to follow the old system of window sales, which will still be available, "at least for the present."

If the experiment is successful, the announcement said, "it may well mean the doom of the present 'come and get it' policy which inconveniences patrons by requiring the pick-up of reservations in advance of established deadlines. . . . The aim of the C. & O. in this latest move is to relieve passengers of all bothersome details beyond the telephone request for seat reservations. All the passenger will have to do thereafter is to get aboard the train just before the scheduled departure.

"Specially trained passenger representatives will ride the trains in the capacity of hosts. They will attend to the seating of passengers in accordance with the reservations shown on the diagram, looking after return-trip arrangements when asked to do so. In this manner it is believed railroad travel can be made more trouble-free, both in the realization and the anticipation."

New Chicago-Cleveland Freight Launched by Nickel Plate

The New York, Chicago & St. Louis has inaugurated a new overnight freight service between Chicago and Cleveland, Ohio, which replaces a similar service which was discontinued during the war. The train, known as the "Overnight Special" leaves Chicago 7:30 p.m., and arrives at Cleveland at 7:30 a.m. Westward the schedule calls for 6:15 p.m. departure from Cleveland, with arrival in Chicago at 7:00 a.m. Cars close at both Chicago and Cleveland at 5 p.m.

Day Warns New England of Car Shortages

Pointing out that one New England railroad is already threatened with prosecution for alleged failure to send empty freight cars outside New England, even while local industries were seeking to secure cars for loading, William H. Day, general chairman of the New England Shippers Advisory Board, has warned that that section is facing "the worst shortage of box cars ever experienced."

In a letter mailed to every member of the board in the six New England states, Mr. Day asserts that curtailments of shipping and even some complete shutdowns of industry which have been experienced in other sections of the country "are now facing all New England, unless shippers and receivers of carload freight will keep in mind that freight cars should be used for the sole purpose of moving freight traffic from where it is to where it is wanted."

He explained that New England, which normally has a surplus of box cars, is now required to share its supply with other sections of the country. "Interstate Commerce Commission orders require each New England carrier to daily furnish designated connecting lines with a prescribed number of empty box cars, no matter what the demands of the moment may be from New England industries for empty box cars. Fulfillment of such orders does not always leave a sufficient reserve to promptly or adequately meet all of the demands of local shippers in New England. In other words, the car shortage has hit New England in no uncertain way.

"Some industries have already been adversely affected by this development. Others will be as the days go by," he continued. "Unless many of our New England industries are to be adversely affected by this situation we must—(1) Order only such cars as are absolutely necessary and will be loaded promptly; (2) load cars as heavily as possible; (3) load and unload cars expeditiously; and (4) remove all blocking and debris prior to the release of cars."

British Monarch Honors Batt

William L. Batt, president of SKF Industries, Inc., of Philadelphia, Pa., has been made an honorary companion of the Order of St. Michael and St. George by King George VI in recognition for his wartime work as a member of the Combined Production and Resources Board, composed of representatives of the United States, Canada and Great Britain. Announcement of the award to Mr. Batt, who was the only American on the king's Dominion Day honors list, was made in Ottawa by the Canadian secretary of state in conjunction with the observance of the anniversary of Canada's elevation to dominion status.

Massachusetts Studies Coal Smoke Problem

Under a "resolve" of the Massachusetts general court, a special commission, consisting of one member of the state senate, three members of the house of representatives and one member appointed by the governor, has been established to make an investigation "relative to prohibiting, restricting or further regulating the use by railroads of coal-burning locomotives" in that state.

Journal-Box Lids

In a circular letter dated July 16, the secretary of the Mechanical Division of the Association of American Railroads has called attention to revised Spec. M-120, Journal-Box Lids, which has been approved by letter ballot, after careful preparation by a sub-committee looking toward the eventual adoption of a standard A. A. R. journal-box lid combining the best features of lids now available. Cooperating were the manufacturers, who will be given an opportunity to submit their lids for approval in accordance with Sec. 6.

The letter stated that, pending formal committee approval of lids now on the market, and to facilitate the progress of this program, car owners are urged to purchase only lids complying with the intent of the revised specification in order that service experience may be rapidly accumulated. Owners will be advised from time to time as to approved lids whose manufacturers have been authorized to apply the A. A. R. approval stamp.

It was also emphasized in the letter that satisfactory closure of the journal box, even with an approved lid, cannot be accomplished unless the journal-box face, hinge lug, and hinge-pin hole are in proper relation and condition, and unless a suitable hinge pin is applied. Experience in regard to the force required to open the lid, Sec. 4 i, is especially desirable, bearing in mind that the figures of 40 lb. minimum and 50 lb. maximum are based on a journal box having all parts in standard condition, and that with worn parts the force required, even with a new lid, will be considerably less.

On the other hand, if a new lid is applied to a box having oversize or improperly

located hinge lugs, the force required may be more than the maximum specified. For this reason, the letter requests that owners exercise close control over the dimensions of new journal boxes, and also institute reclamation methods which will restore badly worn box details to proper dimensions.

Seaboard Air Line Receivership Ends

(*Continued from page 187*)

ner which will best further the interests of the territory and the people whom we are privileged to serve. Technological developments are constantly being studied by our staff, with the view of bringing the advantages of proven devices and methods into our operations", he declared. Mr. Powell further stated that the Seaboard's modernization program would be stepped up as rapidly as possible with the view to improving the road's plant and service to accord with present day demands. "This means the additional purchase of such equipment as Diesel locomotives, lightweight modern coaches and sleeping cars, the laying of heavier rail, more ballast, improved bridge structures and the installation of additional improved signaling devices."

Mr. Powell's Career—Mr. Powell was born in Portsmouth, Va., March 10, 1884. Succumbing to the lure of railroading as a youth, he cut short a projected career in the merchandising field to go with the Seaboard in 1902 as a clerk at a salary of $20 a month. He advanced through positions of steadily increasing importance, being appointed assistant to the comptroller in 1918. About this time he came to the attention of the late S. Davies Warfield, then president of the Seaboard, who persuaded Mr. Powell to leave Portsmouth for work in Mr. Warfield's Baltimore headquarters. In 1920 he was elected comptroller of the company and on Christmas Eve of 1921 he was elected vice-president.

By then the Seaboard had added approximately a thousand miles of road to the system since the time of Mr. Powell's first connection with it, and nearly 3,600 miles of road were then in operation. Expansion continued as the company reached out to acquire new properties serving good traffic producing areas. New lines were also constructed to develop and serve new territory. Mr. Powell was closely identified with and very active in these developments, playing a major role in their consummation. Intimately familiar with the many-sided operations of the company, it was but natural when the presidency became vacant in 1927, by Mr. Warfield's death, that Mr. Powell was elected to that office and placed in charge of the system which had then grown to include all of the 4,200 miles comprising the present Seaboard system. At the time receivership was forced on the company by the unprecedented economic conditions which precipitated the depression of the 1930's, he was appointed a receiver, continuing in that capacity throughout the receivership.

Legh R. Powell, Jr.

June Truck Traffic

Motor carriers reporting to American Trucking Associations, Inc., transported in June 1,758,734 tons of freight, a decrease of 7.3 per cent below the 1,896,992 tons transported in May but an increase of 0.4 per cent above the June, 1945, total of 1,752,464 tons. These figures, according to the A. T. A. statement, are based on comparable returns received from 194 truckers in 39 states; and the A. T. A. index, based on the 1938-40 average monthly tonnage of the reporting carriers, was 182.1 for June.

Open-Top Car Shortage "Most Serious" in "Many Years"

Asserting that the railroads are now "in the midst of the most serious open car shortage that has prevailed in years," Chairman Warren C. Kendall of the Car Service Division, Association of American Railroads, has called upon all transportation officers to intensify their supervision and reissue instructions "with sufficient emphasis to insure positive enforcement of special car orders and a high degree observance of Car Service Rules." Mr. Kendall's call came in a July 25 "Mailgram" which warned that "the seriousness of this situation cannot be overstressed."

He complained that the shortage of open tops, "more especially hoppers," was "extremely disturbing" because of the Car Service Division's belief that "railroads, with few exceptions, own sufficient hoppers and gondolas to satisfactorily protect the requirements, if these cars are handled in accordance with Car Service Rules and such special car orders as circumstances have made necessary, together with expeditious movements of both loads and empties and prompt unloading at destinations." Shortages at the mines during the weeks ended June 20 and 29, and July 20 were reported by Mr. Kendall to have been "upwards of 20,000 cars."

"Without question," he went on, "the present critical coal car situation, more especially on interior coal originating roads, results to a considerable degree from the practice of railroads intercepting and diverting foreign coal cars in disregard of the ownership principle, and the obligation to return coal cars in normal channels. Such practice serves only as a temporary expedient and starts a vicious circle which, in the final analysis, does not provide any more cars, but, on the contrary, further disrupts the normal supply and results in accentuating shortages on roads which are principally originating carriers.

"Coal cars are primarily one-way units, and must return over and over again to their owners by the very nature of the traffic needs which they serve. Moreover, when kept in regular channels, these cars can be better maintained and originate more loads than otherwise. There should be no necessity for the issuance of specific orders for mass distribution of coal cars."

Mr. Kendall conceded that adoption of the program he was suggesting might involve some additional switching, but he insisted that "the necessity for prompt and proper relocation of coal cars, in accordance with the rules, to which all roads have subscribed, will compensate for any temporary extra efforts." He asked that the program be made "fully effective" August 1, and that the transportation officers send him a copy of "your re-issued instructions." Previously the C. S. D. chairman had pointed out that the railroads now have in service about 12,000 fewer open-top cars than they had a year ago; and that they are confronted with "near-record demands" which are causing "widespread and serious deficiencies" in the supply of that type equipment, particularly on coal originating roads.

"Coal production," Mr. Kendall added, "continues at a very high level, with revenue coal loadings averaging in excess of 180,000 cars per week since the first of the current year, excepting only those periods when production was interrupted by strikes or holidays. Ore from ports on the Great Lakes, moving to interior furnaces, got off to a late start this year and is now moving in heavy volume. There are also substantial increases in demands for this type of equipment for sand, stone and gravel throughout the country for deferred road building and construction projects.

"From all indications, these heavy requirements will continue for the next several months. The national forecast of the several Shippers Advisory Boards estimated that the third-quarter loadings of commodities normally handled in hoppers and gondolas will exceed last year's loadings for the corresponding period by approximately 200,000 cars."

Load-Compensating Brake to Be Demonstrated at Chicago

Increased payload capacity is available in the all-welded USS Cor-Ten hopper car through the installation of the experimental load-compensating brake which weighs 300 lb. less than the empty-and-load brake formerly used on the car. The car was designed by the Railroad Research Bureau of United States Steel Corporation. It will be on display at the Illinois Central Twelfth Street Station, Chicago, August 7, 8, and 9 in connection with the meetings of the Mechanical and Purchases & Stores Divisions of the Association of American Railroads. Demonstrations of the brake mechanism will be made during the display.

With the Government Agencies

Crosser Security Bill Signed by President

Expedited handling achieved completion of congressional action last week

President Truman on July 31 signed H. R. 1362, the Crosser bill embodying the Railway Labor Executives Association program for liberalizing the Railroad Retirement and Railroad Unemployment Insurance acts. Congressional action on the measure had been completed July 27 when the House concurred in the Senate amendments, thereby eliminating any necessity for referring the measure to a Senate-House conference committee.

The House's expediting maneuver came under suspension-of-the-rules procedure, the bill's sponsor, Representative Crosser, Democrat of Ohio, having been successful in that tactic after Chairman Lea of the committee on interstate and foreign commerce had blocked an initial Crosser effort to have the House concur in the Senate amendments by unanimous consent. Mr. Lea's own request for unanimous consent to record the House as disagreeing with the amendments and requesting a conference with the Senate was objected to by Representatives Cole of Missouri, Republican, Hook of Michigan, Hendricks of Florida, and White of Idaho, Democrats. Requiring a two-thirds vote, the Crosser motion to suspend the rules was adopted 189 to 64 with 177 members not voting. Thus did Congress persevere to the end in going down the line for the railroad labor unions on a 60-page bill which Mr. Lea said was "written virtually by the beneficiaries of the legislation."

Tax Increases Go Through — While the labor organizations did not quite succeed in obtaining Congressional approval of their program without the crossing of a "t" or the dotting of an "i", the Senate amendments do not alter the new benefit or tax provisions. Aside from correcting various dates to allow for the fact that the bill was being passed more than a year after its introduction, they merely eliminated provisions proposing to extend the coverage of the acts to employees of forwarders, railroad-controlled trucking companies and others performing services in connection with railroad transportation, and provisions designed to transfer the collection of retirement taxes from Bureau of Internal Revenue to the Railroad Retirement Board and to make determinations of R. R. B. binding on the bureau and on the Social Security Board.

Thus the bill still retains all the new benefit provisions which it has been estimated will cost the railroads an additional $100,000,000 a year. Under the tax provisions, which opponents of the bill contend will still leave the retirement system actuarially unsound, another five per cent of taxable payroll (earnings up to $300 a month) would be added to the retirement tax, effective next January 1, thus making the levy 11½ per cent of taxable payroll. This would rise to a maximum of 12½ per cent after December 31, 1951. These retirement taxes are paid half by the carriers and half by the employees, while the carriers pay in addition the entire unemployment insurance levy of three per cent of taxable payroll. The total assessment would therefore eventually become 15½ per cent of payroll of which the carriers would pay 9¼ per cent.

Qualify in Ten Years — Among the more important changes in the Retirement Act are those which liberalize the survivor annuity provisions, adopting the Social Security Act's formula in that respect but making the benefits about 25 per cent larger than those available under that act. The change in the disability provisions would make totally and permanently disabled persons eligible for annuities after 10 years of service, total disability being defined in effect as inability of an employee to pass a physical examination for his regular job. The Retirement Act's present benefits for permanent and total disability require that the employee involved must have completed 30 years of service, or have attained the age of 60 years; and that he must be permanently and totally disabled for any regular employment for hire.

Other new Retirement Act benefits would include liberalized minimum-annuity provisions and reduction from 65 to 60 in the age at which women employees may retire on full pension. The changes in the Unemployment Insurance Act would add sickness and maternity benefits, and increase maximum unemployment benefits from $4 to $5 per day while extending the maximum duration of such benefits in any one year from 100 days to 130 days, i. e., 20 weeks to 26 weeks of five benefit days each.

The bill, which passed the House in its original form on July 3, was approved by the Senate with the above-mentioned amendments on July 26 after it had been debated in two sessions, including an evening meeting on the 25th. This debate brought to light the "steamroller" tactics which were adopted by the bill's proponents, especially Senator Barkley, Democrat of Kentucky, the Senate's majority leader. Among other things, it was revealed that the 11-to-9 vote by which the bill was reported favorably from the Senate committee on interstate

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Plan to Buy Pullman Submitted to I.C.C.

Railroads seeking approval of proposal to acquire sleeping car business

Railroads comprising the "buying group" have applied to the Interstate Commerce Commission for approval of the transaction whereby they propose to acquire the Pullman Company's sleeping car business. Specifically the application sets forth the applicants' view that the transaction will constitute "a contract, agreement or combination for the pooling or division of traffic, or of service, or of gross or net earnings, or of some portion thereof, within the meaning of section 5(1) of the Interstate Commerce Act, as amended"; and it asserts that such pooling or division "will be in the interest of better service to the public and of economy of operation, and will not unduly restrain competition."

The arrangements which the application would have the commission approve are those contemplated in the acquisition agreements entered by the railroad buying group and Pullman, i.e., the Memorandum Agreement of October 18, 1945, and the Supplemental Agreement of November 20, 1945. The agreements provided that the buying group would purchase from Pullman Incorporated all capital stock of the Pullman Company at a price which would reflect the value of property and assets remaining after various individual roads had purchased Pullman light-weight sleeping cars assigned to their lines.

New Sleepers Taken Over—The application reveals that the latter has been done, those sales of light-weight car having brought Pullman a total of $34,697,009. Deducting that amount from the $74,899,491 valuation of Pullman property listed in the offer of sale leaves $40,202,482 as the value of the remaining property and assets which, the application says, "will be the approximate net purchase price of the Pullman Company stock." That amount will be subscribed by members of the buying group in accordance with an allocation formula based on the number of Pullman cars assigned to their lines in 1940 plus 20 per cent.

The application sets up two alternative allocations, one showing how the purchase money would be subscribed by the applicants and the other showing what the allocations would become if the Chesapeake & Ohio, Pere Marquette, and New York, Chicago & St. Louis participated. The heading of the latter tabulation says that

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Express Agency Asks Increase in Charges

I.C.C. told of higher costs—smaller returns at Chicago hearing

Hearings before an Interstate Commerce Commission panel were held in Chicago on July 29 and 30 on the petition of the Railway Express Agency for a general increase in rates on express traffic, docketed by the I. C. C. as Ex Parte No. 163. Commissioners present were Clyde B. Aitchison, who acted as chairman, Charles D. Mahaffie, Walter M. W. Splawn, and J. Haden Alldredge. R. E. A. has asked authority to increase all first-class rates by 20 cents per 100 lb., related second class rates by 15 cents per 100 lb., and to revise the graduated charges for first-class shipments weighing less than 100 lb. to the basis of pound rates plus 50 cents, with a scale of minimum charges for shipments weighing 11 lb. or less. It is anticipated that this will account for 88 per cent of the increased revenues sought, leaving the remainder to be secured through increased commodity rates, money rates and third class minimum charges.

L. O. Head, president of R. E. A., told the commissioners that wages represent approximately 80 per cent of the Agency's total operating expenses, and amount to about 59 per cent of gross operating revenues, a relationship he termed "without parallel in any other large industry." Since 1943, he said, labor costs have advanced $59,950,000 per year, and since 1940, the basic wage cost of the company has risen from 80 cents per hour to $1.20 per hour, or 50 per cent, while at the same time production per hour has fallen. Other expenses have also risen he said, and he cited a 200 per cent increase in motor vehicle maintenance costs since 1940, a 100 per cent increase in costs of station and platform trucks in that time, and a 23 per cent increase in rentals since V-J Day. Although expenses have increased markedly since 1940, rates are still at the levels established in 1939, plus the 10-cent emergency charge authorized in 1942.

An Interim Proposal—Express pound-miles in 1944, he said, were 117 per cent greater than for 1939, and since August, 1945, the volume of express traffic has grown steadily. In spite of this increased volume, he said that the Agency's payments to the railroads for transportation services, including the use of cars, is now less than in 1939. For the present, he said, the Agency is asking only interim relief, which it must have promptly, and he proposed to follow this relief with a more comprehensive rate plan which is now under study by both the Agency and the railroads.

C. A. Frey, vice-president-traffic, of the Agency, said that the increased costs which made the proposals necessary were largely of a "transaction basis" and applied to each shipment regardless of length of haul. For this reason, and for the reason that a percentage increase would bear most heavily on long-haul, heavy-weight traffic, he favored the form of increase proposed. A percentage increase, he said, would tend to divert from the Agency considerable high revenue traffic, the volume of which he considered it necessary for the company to augment rather than to permit to decline.

"The past policy of the Express Agency in maintaining extremely low charges on low-weight, first-class shipments to promote their movement as a fill-in of unused capacity is no longer justified, as, with the very substantially increased average wage per hour of express employees, the handling of low-weight shipments at the existing level of charges must necessarily be at a loss since the time and labor consumed in handling shipments in the lower weight brackets is in many respects the same as for shipments of greater weight," he declared. "The proposed schedule of first and second class express charges provides a minimum charge for 1-lb. shipments of 65 cents as compared with the present 1-lb. minimum charge of 35 cents. While no method has been found for computing unit costs of express service for shipments of different classes, weights, sizes, etc., it is doubtful whether the minimum of 65 cents is high enough to cover all properly allocated costs of a minimum transaction."

Air Competition—Mr. Frey said that he expects express traffic in the future to stabilize at an average weight of about 50 lb. per shipment and an average haul of about 500 miles, or probably lower in the event a substantial portion of the long-haul, express-type traffic continues in air-transport service at quantity, volume and contract rates, which are not permissible in common-carrier rail-express service."

W. A. Benson, vice-president-accounting, presented various statistics and analyses of the Agency's operations since 1918 and explained the basis of the contract with the railways. He said that in 1929, 34 cents out of each dollar of express revenues were spent for payrolls and slightly more than 50 cents for express privileges, the amount received by the railroads in payment for their services in transporting less-carload express shipments and as income on their investment in the Agency. In 1936, 43 cents of the express dollar went for wages and about 39 cents for express privileges, and in 1945 wages consumed 47 cents and express privileges 35½ cents. Had 1946 wage rates been in effect in 1945, 59 cents of the dollar would have gone to wages and only 21 cents would have been available for express privileges.

Representation of Employees

As the result of a recent election which has been certified by the National Mediation Board, the Brotherhood of Railroad Shop Crafts of America, by virtue of a 159 to 116 victory over the International Brotherhood of Blacksmiths, Drop Forgers and Helpers, operating through the Railway Employees' Department, American Federation of Labor, has retained its right to represent blacksmiths, including their helpers and apprentices, employed by the Louisville & Nashville.

Other referenda involving employees who formerly were without representation, which also have been certified by the N. M. B., resulted in the Railroad Yardmasters of America being authorized to represent stationmasters employed by the L. & N., and the Brotherhood of Maintenance of Way Employees being delegated to represent powerhouse employees and railway shop laborers employed by the Burlington-Rock Island.

Johnson Still Urging 50,000 Car Program

O. D. T. statement says plans "are presently being worked out"

Making an official statement with respect to pending proposals for government financing of the construction of 50,000 box cars, the Office of Defense Transportation said on July 30 that plans for such a program "are presently being worked out in interagency and industry discussions." As reported in the *Railway Age* of July 20, page 99, O. D. T. Director J. Monroe Johnson had revealed previously that he was exploring the possibility of working out some "modus vivendi" whereby that number of cars would be purchased by the Reconstruction Finance Corporation for lease to the railroads.

The July 30 statement came a few days after Colonel Johnson and J. J. Pelley, president of the Association of American Railroads, had conferred on the matter with officers of the R. F. C., but it did not refer to such conferences nor otherwise mention the government lending agency. It did, however, predict that freight car demands for the movement of grain, merchandise and raw materials will far outrun the supply of cars during the coming months; and it said that the construction program was being developed to prevent a slowdown of the reconversion program.

C.P.A. Help Sought—The O.D.T. statement added that efforts are also being made by industry and government agencies to increase the production of new freight car equipment now on order and to reduce the number of cars awaiting repair. The agency reported that it has requested the Civilian Production Administration to work out a program in the near future to provide sufficient steel products, including castings, to complete the manufacture of rail car equipment on order and that it also has requested that methods be developed to channel needed steel components, including structurals, shapes, bars and pipe to reduce the number of bad order cars out of service.

The O. D. T. said further that the 80,000 cars which earlier this year it had recommended should be constructed during 1946 represented the probable maximum that could be produced and the absolute minimum needed to meet immediate demands during 1946 and to provide for the replacement of equipment heavily over-used during the war period.

At the same time, however, it pointed out that freight car construction so far this year has fallen far behind its recommended requirements, adding that from January 1 to June 30 only 18,256 freight cars were built. It said that 39,437 cars were on order as of July 1, including 32,062 in commercial car building shops and 7,375 in railroad shops. It added that the total number of cars already built plus those on order is therefore expected to amount to 57,693 cars, which, it said, is approximately 22,000 under its estimate of requirements.

May Use Aluminum—"A 50,000 railroad freight car building program," the

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Railroad Revamp Bill Passed by Congress

Final version is blend of the Wheeler, Reed, and Hobbs proposals

Congressional action was completed this week on legislation setting up procedures short of bankruptcy for the readjustment of railroad financial structures, including provisions making such procedures available to some large railroads undergoing reorganization as well as to all roads not yet in the hands of the courts. The final congressional approval came on July 31 when the House and Senate adopted the conference report which reconciled their differing versions by blending parts of them into a completely rewritten bill.

The conference committee had before it the Senate version sponsored by Senator Wheeler, Democrat of Montana and chairman of the committee on interstate commerce, and passed by the Senate on June 15; and the House version which embodied the bill (H.R. 5924) sponsored by Representative Reed, Republican of Illinois, and parts of H. R. 37, sponsored by Representative Hobbs, Democrat of Alabama, and passed by the House in February, 1945. The final version retains the number of the Wheeler bill, S. 1253, the House having made its version an amendment in the form of a substitute to that Senate-approved measure in order to expedite reference to the conference committee.

McLaughlin Act Amplified—In general, the Wheeler bill proposed to reestablish in modified and amplified form the voluntary readjustment procedures of the former McLaughlin act, which expired November 1, 1945. Its application to carriers already undergoing reorganization was limited to those roads involved in proceedings under section 77 of the Bankruptcy Act which reported for any calendar years from 1942 to 1944 gross railway operating revenues in excess of $50,000,000. The Reed bill in its original form would have enable railroads undergoing reorganization to effect readjustment of their financial structures without further proceedings under section 77, if their properties during a period of seven years have provided annual earnings sufficient to pay fixed charges. The Hobbs bill's principal emphasis was on its proposed section 77 amendments, which would restrict the power of the Interstate Commerce Commission to reduce the capitalization of railroads reorganized under that law and give the federal courts additional responsibilities in reviewing plans proposed by the commission.

With respect to their applicability to railroads already undergoing reorganization, provisions of the finally-approved version are subject to limitations of both the Wheeler and Reed bills. Thus railroads in receivership are excluded and the applicability to roads reorganizing under section 77 is restricted to those with gross operating revenues in excess of $50,000,000 for any calendar year from 1942 to 1944, inclusive, whose income available for fixed charges has been equal to the fixed charges for the seven-year period from 1939 through 1945.

For purposes of the bill the income available for fixed charges is to be that reported to the I.C.C., "plus (a) the total of any amounts so reported as a deficit for fixed charges in any of said seven years to the extent of the total of any amounts reported for federal income and excess-profits taxes in any of said years, and (b) amounts deducted in any year for amortization of emergency facilities under section 124 of the Internal Revenue Code in excess of 20 per cent of the cost of such facilities of such carrier, or, on a joint or consolidated basis, of the carriers in the system of which the carrier is a part, or of such carrier and other carriers, directly or indirectly controlled by it, through direct or indirect ownership of at least a majority of their stock."

Rio Grande Excluded—The amendment to the Wheeler bill which Senator Johnson, Democrat of Colorado, sponsored to exempt the Denver & Rio Grande Western is rewritten in the final version to stipulate that the provisions to applicable roads undergoing reorganization "shall not apply if at the time of filing the petition for reorganization . . . more than 95 per cent of the outstanding voting stock of the debtor . . . shall have been controlled, directly or indirectly, by another railroad corporation not a debtor in the same proceeding . . . and/or by a corporation owning or controlling more than 95 per cent of the voting stock of another railroad corporation; provided also, that this section shall not apply to a railroad corporation if (1) all of its stock is owned directly or indirectly by an operating railroad corporation, (2) both corporations are in the same proceeding under the said section 77, and (3) pursuant to the provisions in this paragraph, this section does not apply to the said operating railroad corporation which owns all of the stock of the said controlled railroad corporation."

The provisions applying to roads undergoing reorganization are in the bill's section 2 while the first section proposes the reenactment of the McLaughlin act in modified form. The principal change from this former law is the making of the I.C.C. instead of the court the principal arbiter in the framing of voluntary reorganization plans. There are, however, provisions for appeal to the courts from determinations of the commission.

Any railroad not already undergoing reorganization would be authorized to file with the commission an application for authority to effect a voluntary readjustment of its financial structure, such filing to be pursuant to such rules and regulations as the commission might prescribe. A public hearing on the application would be required, and if the commission then made certain findings it would order the carrier to submit the proposed plan to holders of each class of obligations affected, for acceptance or rejection. An order approving the plan or a modified version thereof would be entered by the commission if it found that the proposal had been assented to by holders of 66⅔ per cent of each class of affected obligations—or such lesser or

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Bulwinkle Bill Death Decreed by Barkley

Little hope remained for reprieve as Congress headed toward adjournment

With Congress headed toward an August 2 adjournment, the death knell of the House-approved Bulwinkle bill appeared to have been sounded in the Senate on July 27 when Majority Leader Barkley, Democrat of Kentucky, executed a parliamentary maneuver to displace a pending motion for consideration of the measure which was being pressed by Senator Reed, Republican of Kansas. The bill, H. R. 2536, which was passed by the House on December 10, 1945, would stay the operation of the anti-trust laws with respect to carrier rate-making procedures and other joint-action arrangements approved by the Interstate Commerce Commission.

For sometime prior to July 27 (since July 5), Senator Barkley had been closing daily sessions of the Senate with recess motions which leave pending matters with the status of "unfinished business" — in order for the following day. On June 27, however, his action which resulted in ending the day's session was a motion to "adjourn." This had the effect of leaving Senator Reed in a position where he would have to seek recognition for the purpose of making another motion for Senate consideration of the bill.

Administration Opposed — With the majority leadership in opposition, it seemed unlikely that the Kansan, who was placed in charge of the bill by the Senate committee on interstate commerce, would be recognized by the Senate's presiding officer if he arose for the purpose of renewing his motion during the remainder of the session. Majority Leader Barkley's tactics in this case were in marked contrast to the zeal (noted elsewhere herein) with which he expedited final Congressional action on the Crosser bill embodying the Railway Labor Executives Association program for liberalizing the Railroad Retirement and Railroad Unemployment Insurance acts.

Senator Reed's efforts to get the Bulwinkle bill before the Senate last week began during the session of Monday, July 22. There came a brief skirmish wherein Senator Barkley succeeded in having the Reed motion ruled out of order. During the July 26 session, the Kansan succeeded in making his motion, consideration of which was thus in order for the following day — Senator Barkley meanwhile calling attention to the fact that the motion was "debatable" and serving notice that it "will be discussed."

The discussion, sandwiched beween other business at the July 27 session, was opened by Senator Reed who explained briefly the bill's provisions and background. In the latter connection, he pointed out that carrier rate bureaus had operated for years without challenge. He recalled that there was a complaint against the rate-making machinery in 1900, but it "was not pushed to a complete finality." And between 1900

and 1942, when the Department of Justice's Anti-Trust Division became interested, "no question was ever raised that these rate bureaus and conferences between railroads were in any way in conflict with the Sherman Anti-Trust Act."

Senator Reed went on to assert that "the shippers of the country universally desire this bill to be passed and they are supporting it." He also pointed out that the proposed legislation had been approved by the I. C. C., Office of Defense Transportation, War and Navy departments, American Farm Bureau Federation, National Grange, National Association of Railroad and Utilities Commissioners, and regulatory commissions "of virtually every state in the Union."

"Controversial" Bill—Senator Barkley, who said that he does not ordinarily oppose motions to proceed with the consideration of legislation, was this time acting in exceptional fashion. He was against the Reed motion. In the first place, he said, the bill was "very controversial" and it had been amended by the Senate committee. Thus it would have to go back to the House; and Mr. Barkley was advised that "the legislative situation in the House next week will likely assume such a posture that it will be difficult to get anything considered except by unanimous consent." But, aside from all this, the majority leader felt generally that "a bill of this character, controversial in nature, should not be taken up and considered in the Senate at this time." Finally, he complained that record of the Senate interstate commerce committee hearings had not been printed and was not available to all senators.

Much of the subsequent discussion of the motion echoed this complaint about the lack of the hearing record. Some of such discussion embodied implied charges that there might have been some scheme to withhold the hearings; but Senator Reed denied this, explaining that there had been delay at the Government Printing Office. And he had copies of the hearing record (a document of 2,416 pages) delivered to the desks of all Senators on July 30.

Meanwhile Senator Reed and Senator Tunnell, Democrat of Delaware, had expressed some surprise at what they viewed as a rather unusual display of interest in committee hearings. Among those making the most insistent demands for the printed record were Senators Russell of Georgia and Overton of Louisiana, Democrats. And Senator Reed suggested that the situation perhaps furnished Mr. Russell "with a better talking point than he would have had under any other circumstances."

Georgia Politicians Alarmed—Senator Russell and other opponents of the bill, including Mr. Barkley, expressed fears that it would end proceedings on Georgia's complaint against the railroads in the Supreme Court and the Department of Justice's action against the A. A. R. and Western railroads in the so-called Lincoln (Nebr.) case. This was denied by Senator Reed and other proponents of the legislation, including Senator Ferguson, Republican of Michigan, who said he had read the bill carefully from that standpoint. Senator Langer, Republican of North Dakota, nevertheless complained that, even though the Georgia case were not affected, there could be no future actions of that kind. He went on to say that several governors looked upon the Georgia suit as a "test case," which if successful will be followed by many similar cases.

In addition to Senators Reed, Ferguson and Tunnell, those speaking in favor of the motion included Senator Hawkes, Republican of New Jersey, who pointed out that the bill merely proposed to do "exactly the same thing as has been done in the case of the Civil Aeronautics Board, which is authorized to approve agreements between air carriers." Senator Johnson, Democrat of Colorado, read a telegram he had just received from George M. Harrison, president of the Brotherhood of Railway Clerks, who urged enactment of the bill. Senator Russell suggested that Mr. Harrison had been "sold a bill of goods by a smart attorney for the railroad lines," whereupon Senator Johnson called the Clerks' president "one of the ablest and brightest of the men who represent the railroad employees."

Senator Smith, Republican of New Jersey, pointed out that the I. C. C. had been established to handle the matters dealt with in the bill, and he wondered if the real issue before the Senate were not confidence in the commission. Senator Russell replied that he had been criticizing the commission "for 20 years," and he went on to bring up again the interterritorial freight-rate issue which had previously been referred to from time to time.

The July 27 debate closed with Senator Reed's explanation of the day's proceedings for the benefit of Senator McMahon, Democrat of Connecticut, who had been absent from the session. "The Senator from Kansas," said Mr. Reed, referring to himself, "opened the discussion this morning with a rather brief outline of the general purposes of the bill, because at that time the question was whether or not the Senate would proceed to the consideration of the bill by adopting the motion. The Senator from Kansas later expected to discuss the bill in considerable detail, but that time has not arrived, and it seems a trifle uncertain when it will."

Money for Retirement Board and Mediation Board

President Truman on July 26 signed H. R. 6739, the Labor-Federal Security Appropriation Bill which carries fiscal 1947 funds for the Railroad Retirement Board, National Mediation Board, and National Railroad Adjustment Board. Congressional action on the measure was completed July 20, as noted in the *Railway Age* of July 27, page 147.

New Schedule of Hearings on Truck-Forwarder Agreements

Making a second change in the original schedule of hearings in the No. 29493 investigation which it instituted for the purpose of determining "reasonable, just and equitable terms and conditions under which agreements may be made for the utilization by freight forwarders of services and instrumentalities of common carriers by motor vehicle," the Interstate Commerce Commission has now announced that the New York sessions previously scheduled to begin September 9 have been canceled and that hearings will be held on that day at San Francisco, Calif. They will be before Examiner Williams in the United States Post Office and Court House Building.

The San Francisco sessions will be followed by other hearings at the Hotel President, Kansas City, Mo., on September 16 before Examiner Williams; at the Hotel Atlanta-Biltmore, Atlanta, Ga., on September 23 before Examiner Carter; and at the Hotel Morrison, Chicago, on October 29 before both examiners. The commission's notice said that the Chicago sessions will complete the hearings.

As noted in the *Railway Age* of July 6, page 27, the original schedule had called for Chicago hearings on July 15; but these were canceled and the opening sessions were held at New York July 8 to 10.

Approves New Law on Larceny in Interstate Commerce

President Truman has approved the recently-enacted bill (H. R. 4180) to amend the law relating to larceny in interstate commerce. The amendments extend to vessels, aircraft or other vehicles those provisions of the previous law which make it a federal offense to steal from or defraud a passenger on an interstate train; also, they expand the law to make it cover embezzlement as well as larceny, thus making it a federal offense for any carrier employee to unlawfully convert to his own use any funds or property in his custody.

Transportation Reserve to Have Extension Courses

Although the organization of the Transportation Corps Reserve of the post-war Army is so far in a somewhat nebulous state, pending development of the general pattern of the reserve organization, it is reported that approximately 50 per cent of the Transportation Corps officers who served in World War II are applying for commissions in the reserve upon relief from active duty.

Plans are under way to provide for advancement in rank in the reserve. One requisite to such advancement will be the completion of specified extension courses, somewhat like those offered in certain branches of the military service before the war. The first of these courses will be offered late this year, it is now indicated. The courses will be, for the present, on four levels, designated as the 10, 20, 30 and 40 series, corresponding to grades of instruction designed for different ranks.

The Transportation Corps courses in preparation are described as of the "streamlined" variety, consisting of sub-courses of three to nine lessons and an examination or review, with each lesson requiring approximately two hours. Lesson and examination questions will be principally of the multiple-choice or true-and-false type, rather than the old lengthy essay type.

In addition to the preliminary courses of the 10 and 20 levels, more or less uniform for all trainees, there are separate courses of the 30 and 40 series for specialists in each type of transportation. The railroad course in the 30 series includes such topics

as handling dangerous cargo, road operation, yard operation, dispatching, car and locomotive repair, stores, signal maintenance, water supply and movement control. The more advanced or 40 level course carries on most of these subjects and also goes into such matters as rules of warfare, prevention of sabotage, duties of road and rail transportation officers, and unit operations.

Plan to Buy Pullman Submitted to I. C. C.

(Continued from page 194)

those three roads on December 29, 1945, "elected to become members of the buying group, but only in the event that the court decision permitting the buying group to acquire the stock becomes final, and they reserved the right to appeal from or otherwise contest such decision. They have appealed and accordingly they are not shown as applicants herein."

The allocation tables show that if the C. & O., Nickel Plate, and P. M. were participants their total subscription would amount to about $764,209 or 1.9 per cent of the $40,202,482 purchase price. The table of proposed subscriptions by the applicants shows that the Pennsylvania would subscribe $6,629,389 or 16.49 per cent of the total; New York Central, $6,351,992 or 15.8 per cent; Southern Pacific, $3,501,636 or 8.71 per cent; Union Pacific, $2,460,392 or 6.12 per cent; Atchison, Topeka & Santa Fe, $2,299,582 or 5.72 per cent; Southern, $1,628,201 or 4.05 per cent; New York, New Haven & Hartford, $1,451,310 or 3.61 per cent; Baltimore & Ohio, $1,399,046 or 3.48 per cent; Chicago & North Western, including Chicago, St. Paul, Minneapolis & Omaha, $1,250,297 or 3.11 per cent; Chicago, Burlington & Quincy, $1,117,629 or 2.78 per cent. Other participants would subscribe less than $1,000,000 each.

Ninety-four Per Cent Participation—"The buying group as now constituted, consisting of applicants herein, represent more than 94 per cent of the sleeping car service conducted by the Pullman Company," according to the application. Among Pullman-contract roads not participating are the Chicago & Eastern Illinois, the Minneapolis, St. Paul & Sault Ste. Marie, the Chicago, Indianapolis & Louisville, the St. Louis-Southwestern, the Central of New Jersey, the Canadian lines and the National of Mexico.

Giving the background of the transaction, the application traces briefly the history of the government's successful anti-trust action against the Pullman companies, and developments subsequent to Pullman Incorporated's election to sell its stock in the Pullman Company and retain its interest in Pullman-Standard Car Manufacturing Company. The sale to the railroad buying group was approved on January 4 by the special three-judge federal court sitting at Philadelphia, Pa., which had heard the anti-trust complaint. As noted above, the C. & O., Nickel Plate and P.M. have appealed to the Supreme Court, as has the Department of Justice. Meanwhile the Pullman Company is continuing to operate its services under a March 4 order of the Philadelphia court which provides for such operation pending the Supreme Court's action on the appeals.

The buying group's purpose in purchasing the Pullman Company stock is set forth in the application with a quotation from the Memorandum Agreement, the quotation being as follows: "1. To maintain without interruption orderly sleeping car service requisite in the interest of the public and for the military establishment in the existing emergency. 2. To afford means whereby every railroad, subject to the terms of this Memorandum Agreement, may: (a) acquire all or any part of the sleeping cars regularly assigned to its lines; (b) conduct its own sleeping car operation, in whole or in part, or arrange, through contract, on reasonable and non-discriminatory terms, for the conduct thereof by others; (c) perform its own service or maintenance, or service and maintenance, of sleeping cars used in operations on its lines; (d) procure such service or maintenance, or service and maintenance, through contract on reasonable and non-discriminatory terms with the Pullman Company under railroad ownership or with a (successor) service company."

The application was filed by a committee of counsel which included Jacob Aronson, vice-president, New York Central; John Dickinson, vice-president, Pennsylvania; Emmett E. McInnis, vice-president, Atchison, Topeka & Santa Fe; and Sydney R. Prince, general counsel, Southern.

Railroad Revamp Bill Passed by Congress

(Continued from page 196)

greater percentages as the commission might fix in particular situations.

The voluntary reorganization plans could not embrace equipment trust certificates or any other evidences of indebtedness the payment of which is secured by equipment. Moreover, these provisions "are permissive and not mandatory and shall not require any carrier to obtain authorization and approval of the commission . . . for the making of any alteration or modification of any provision of any of its obligations . . . which it may be able lawfully to make in any other manner. . . "

Time Limits Set—On the other hand, section 2 would require the covered roads undergoing reorganization to "institute proceedings and file applications under section 1 of this act as expeditiously as practicable but in no event later than 18 months after the effective date of this act, or such longer period as the commission, on application, may approve." And while the properties would remain "in the custody of the United States court," the bill has provisions requiring the debtor roads to hold elections within 60 days after its effective date to choose directors and officers. When this has been done the appointments, compensation, and fees of trustees and counsel for trustees "shall be terminated." The debtor would then proceed before the commission with its voluntary revamp plan; but here the commission would have power to promulgate its own plan for any debtor whose efforts had not resulted in adoption of a plan within a year after the filing of its application.

In taking such action, the commission would be required to "give full effect to all changes, facts, and developments since 1940, including, without limitation, for such period total railway operating revenues, operating expenses and other charges, net earnings, the full effect of amortization deductions on earnings of past and future years, improvements to the property, the effect of the released collateral through past or future payment of loans, cash and net current assets, retirements and purchases of debt, including retirements and purchases at a discount that have been made or that can reasonably be made, adjustment and reduction of interest rates on outstanding debt that may be made including the adjustment and reduction of interest rates for prior years."

One section of the bill eals with carriers still in the jurisdiction of the courts, but with reorganization securities already issued under approved reorganization plans. It would become lawful for such a carrier, with I.C.C. approval, to amend the plan to the extent of issuing options or warrants to take care of those security holders who would otherwise be wiped out.

Car Service Orders

Service Order No. 85 which the Interstate Commerce Commission issued in September, 1942, to set aside state laws, restrictions, regulations or agreements limiting the length of freight trains, will be vacated on August 15 by Service Order 85-A issued by the commission this week.

Service Order No. 559 establishes for gondolas, hoppers, and covered hoppers the same scale of super-demurrage charges, running up to $16.50 a day, that is in effect with respect to box cars. The order does not apply to import, export, coastwise or inter-coastal traffic, nor to hopper cars loaded with carbon black. It became effective August 1 and is scheduled to expire December 1.

Service Order No. 562, effective from July 26 until December 31 unless otherwise modified, reinstates the provisions of Order 514, appointing Deputy Director Homer C. King of the Office of Defense Transportation as I. C. C. agent vested with authority to divert and reroute freight traffic and empty cars when necessary to relieve congestion.

Amendment No. 1 to Service Order No. 546 advanced from July 31 to September 20 the expiration date of that order which directs railroads to forward via the most available open routes traffic routed over the strike-bound Mississippi Central.

Commission to Investigate New Pullman Regulations

Division 2 of the Interstate Commerce Commission has instituted upon its own motion an investigation into the reasonableness and lawfulness of the new rules and regulations governing the redemption of sleeping and parlor car tickets which the Pullman Company put into effect August 1. The proceeding is docketed as No. 29,590 and hearings have been set for September 17 at the commission's offices in Washington, D. C., before Examiner Berry.

Under the new regulations, as reported

in *Railway Age*, July 6, page 26, ticket agents will refund the purchase price of unused sleeping car tickets only (1) when the space covered by the ticket is released not later than the day before the train departs; (2) when the late arrival of another train has caused the passenger to miss connections and (3) when, for any reason, the Pullman space covered by the ticket is unavailable. In emergencies, ticket agents will accept release of space up to train time, or even later, but the request for refund of the purchase price of the ticket covering it must be made direct to the Pullman Company, Chicago, and refund will be made only if the space covered by the ticket has been resold.

Johnson Still Urging 50,000 Car Program

(*Continued from page 195*)

O. D. T. statement continued, "would call for the use of 900,000 to 1,000,000 tons of steel. Because of the continuing high demand for steel, consideration is being given the possibility of using aluminum in the construction of the box cars, with steel being used in the under frames and aluminum in the body in place of steel and lumber."

Emphasizing the need for immediate action to increase the production of new cars and to reduce the number of bad order cars, the O. D. T. stated that car loadings have been increasing regularly except for a short decline during the period of the steel mill and coal strikes. It said that loadings have risen sharply in recent weeks and presently are running over war-time peaks, with a near record loading of 921,496 cars achieved for the week ended July 20.

"By early fall it is estimated the potential need will call for about 1,000,000 cars per week," the statement said. "Under present car supply conditions, it will be impossible to meet the demand fully. Once the peak has been reached—about October 15—demand will run at peak levels until such time as the weekly deficiency shall have been absorbed. In other words, it is expected that there will be a backlog of unmoved material for an extended period."

Car Ownership Dropping—Continuing, the O. D. T. pointed out that box car loadings also are exceeding peak war-time figures. It reported that for the week ended July 20, loadings topped 396,000, which, it said, was 28,000 over the total for the week ending August 11, 1945, the week prior to V-J Day. It commented that while the demands for box cars have been increasing, the supply of serviceable box cars has decreased from about 723,500 as of April 23, 1945, to less than 702,000 at the present time.

The agency's statement added that total car ownership is declining in the face of heavy increases in traffic. It pointed out that although Class I railroad car ownership increased 65,684 from 1942 to 1945—bringing the total to 1,769,423 as of December 31, 1945—about 350,000 of these cars would have been scrapped under pre-war conditions. It said that only 103,016 cars were removed from service, however, because of the dire need for equipment.

"It is estimated that at present about 300,000 cars are overdue for retirement," the statement continued. "In fact cars being removed from service are exceeding the number of new cars being built. Total car ownership declined about 11,000 to 1,758,420 between January 1 and January 30, about 29,000 cars being removed from service in a period in which 18,256 cars were built. The number of bad order cars is about twice as great as the number out of service at various times during the war. At the low point during the war period, the percentage of cars awaiting repairs declined 2.4 per cent of ownership for all cars and 2.3 per cent for box cars. Throughout 1943 and 1944 the percentage remained under three."

In conclusion, the statement said that car repair maintenance work has been losing ground since April, 1945, adding that percentages as of June 30 were 4.7 per cent for all cars and 4.4 per cent for box cars. It said that the total number of all bad order cars amounted to 79,766 and the box car total 31,577.

Pelley, Johnson in Conference With R. F. C. on Box Cars

Office of Defense Transportation proposals for the acquisition by the government of 50,000 box cars for lease to the railroads were the subject of a July 26 conference in which O. D. T. Director J. Monroe Johnson and J. J. Pelley, president of the Association of American Railroads, met with officers of the Reconstruction Finance Corporation. The conference followed the regular monthly meeting of the A. A. R. board of directors where the box car situation had been one of the principal matters considered after the directors heard Colonel Johnson outline his proposals.

As noted in the *Railway Age* of July 20, page 99, the O. D. T. director had previously expressed his view that the cars might be purchased by the R. F. C. and parceled out by lease to various roads, each road considering the leased equipment as home cars and obligating itself to purchase them before it bought any other cars of the same type. Colonel Johnson said after the meeting that he had told the A. A. R. board that some such plan would result in the "easiest terms" for both the government and the carriers.

He also said that he had emphasized his view that there is immediate need for the 50,000 cars, plus all others that can be built. In fact, he thinks "we could use 200,000 cars this minute." Thus 50,000 cars would "just minimize" and "not avert" the shortage, which, Colonel Johnson said, was "more acute now than during the war." He noted that "the big season is yet to come," adding that the railroads will be "fighting the wheat situation as late as March, 1947."

With respect to prospects for deliveries, Colonel Johnson said he had told the A. A. R. directors that it might be possible to get 18,000 box cars produced monthly. He conceded that the outlook on materials is "bad," but added that it was "not impossible."

The O. D. T. director also said that the government now has on hand approximately 1,200 surplus troop sleepers and 400 surplus troop kitchen cars, which could readily be converted into box cars, although he intimated that "usual government procedures" would probably delay release of the cars.

Underwood Succeeds Ebert as Inquiry Bureau Director

The appointment of Harry L. Underwood as director of its Bureau of Inquiry, effective July 28, was announced last week by the Interstate Commerce Commission. Mr. Underwood, who has been assistant director of the bureau for the past four years, succeeds Edgar M. Ebert, who has retired.

Born in Binghamton, N. Y., on January 29, 1883, Mr. Underwood has been in the employ of the commission for 12 years, during which time he also served in the office of the chief counsel. His government service also includes five years as assistant United States attorney in Washington, D. C., and from 1918 to 1926 he served in the Lands Division of the Department of Justice. He was engaged in private law practice in Chicago, Ill., before entering the government service and later also engaged in private practice in Washington.

Harry L. Underwood

Mr. Ebert, who was born in Washington on November 22, 1887, entered the service of the I. C. C. in 1908 as a clerk and stenographer and was in the continuous employ of the commission until his recent retirement. He is a graduate of the National University law school and was admitted to the bar of the District of Columbia. Mr. Ebert was transferred to the Bureau of Inquiry in 1908, shortly after it was organized. For a period of 11 months in 1914 and 1915, he served as private secretary to Commissioner Hall, but then returned to the bureau as a special agent, a position which he occupied until 1922. He was an attorney for the bureau until 1930, when he was appointed assistant director, and in December, 1942, succeeded the late W. H. Bonneville as director.

Won't Authorize Higher Scrap Prices, O.P.A. Says

No increases in current ceiling prices for iron and steel scrap will be granted "in the foreseeable future," the Office of Price Administration said in a July 27 announce-

ment. The announcement explained that O. P. A. considers as "adequate" the June 30 ceilings under which scrap prices were brought again when the price-control agency was revived on July 25.

The announcement, so it said, was "expected to result in release of scrap that was being withheld in the belief that a price increase was being considered."

Crosser Security Bill Signed by President

(Continued from page 194)

commerce was recorded only after three proxies of absent members had been voted in favor of the report. Meanwhile, Senator Barkley, who had presided at the committee meeting in the absence of Chairman Wheeler, had ruled out of order a motion to hold the bill a couple of days for further committee consideration, which Senator Reed, Republican of Kansas, offered as a substitute for the motion to make the favorable report immediately. Senator Hawkes, Republican of New Jersey, said during the course of the debate that he had asked "the best parliamentarians around the Senate and the House" about the status of the Reed motion; and "they all agree it was not out of order."

Senators in a Hurry—In addition to Senator Barkley, the principal Senate proponents of the bill were Chairman Wheeler of the committee on interstate commerce and Senator Johnson, Democrat of Colorado. All of them urged that the bill be passed without amendment because of the existing "parliamentary situation" wherein an amendment might send the bill to conference where it would be in danger of being left to die with the Congress which was planning to adjourn sine die at the end of this week. The sponsors conceded, however, that some amendments were desirable; and Senator Barkley had devised an ingenious plan for making changes without involving the bill itself in the "parliamentary situation."

He had framed a concurrent resolution which he proposed to offer immediately after the Senate had acted on the bill. The resolution would have directed the enrolling clerk of the House to make certain changes in the bill when he enrolled it for submission to the President. This procedure was protested by several senators, including Senator Taft, Republican of Ohio, who called it a "curious method of legislation" and a "very strange precedent," and by Senator Donnell, Republican of Missouri. The majority leader insisted that the concurrent-resolution device had been used frequently to direct that changes be made in bills before their enrollment, but he did concede that such previous use was for changes less extensive than those he would have proposed. Senator Taft summed up the situation by saying in effect that Mr. Barkley was preparing to have the Senate correct mistakes which it was then about to make.

Forwarders Exempted—The concurrent-resolution plan was abandoned when the proponents failed to save the bill from amendments, the first amendment adopted being that to eliminate the extended coverage provisions. Sponsored by Senator Hoey, Democrat of North Carolina, it was approved by a 40-to-35 vote, with 21 senators not voting. Then came the amendment, sponsored by Senator George, Democrat of Georgia, to correct the dates and leave retirement-tax collections with the Bureau of Internal Revenue. Provisions eliminated by this amendment included those which would have made compensation creditable up to an average of $300 per month in any calendar year instead of up to $300 in each calendar month. Management representatives at House hearings on the bill had called that proposed change "a slyly concealed tax-base increase in addition to the tax-rate increases proposed in the bill," explaining by way of example that train-service employees may earn well over $300 in full-time months and small amounts or nothing in other months.

While several senators had served notice of their intention to propose various amendments, the only other one actually offered was that whereby Senator Hawkes proposed to strike out the new Unemployment Insurance Act benefits and provide for lower unemployment taxes on a sliding-scale basis depending upon the size of the Unemployment Insurance Fund. The amendment was rejected on a roll-call vote of 41 to 22 with 33 not voting. In arguing against Mr. Hawkes' proposal, Senator Wheeler protested that it was a "fundamental amendment" which had never been before the interstate commerce committee. "At any time," Mr. Wheeler said, "the railroads themselves could have had their representatives propose such an amendment and could have had it studied by the committee. . . . The railroads themselves have never requested the interstate commerce committee to consider such an amendment or to adopt such an amendment."

Lea Substitute Not Offered—Among the senators who did not follow through on their notices of intention to offer amendments was Senator Capehart, Republican of Indiana, who had planned to propose, in the form of an amendment, the text of the more moderate substitute bill which was reported from the House committee on interstate and foreign commerce but rejected by the House. Final Senate action approving the bill came on a roll-call vote of 55 to 11 with 30 not voting. The 11 voting in opposition were Senators Austin of Vermont, Ball of Minnesota, Capper of Kansas, Gurney of South Dakota, Hart of Connecticut, Hawkes of New Jersey, Moore of Oklahoma, Reed of Kansas, Taft of Ohio, Wherry of Nebraska, and White of Maine, all Republicans.

Most of the Senate debate centered around the new coverage provisions, which were eliminated by the Hoey amendment. There was also much talk about Senator Barkley's plan for amending the bill by a separate concurrent resolution until that idea was abandoned with the adoption of the first amendment to the bill itself. The principal speech in opposition to the bill as a whole was made by Senator Taft, who nevertheless indicated that he would have favored a bill drawn along the lines of the substitute which the House committee proposed without success.

The House debate which preceded adoption of the Crosser motion to suspend the rules and concur in the Senate amendments was brief, the only speakers in opposition to the motion being Chairman Lea of the committee on interstate and foreign commerce and that committee's ranking minority member, Representative Wolverton, Republican of New Jersey. Meanwhile, Mr. Crosser had the support of the House's majority leader, Representative McCormack, Democrat of Massachusetts.

I. C. C. to Hear Views on Ship-Competitive Rate Case

Because the investigation sought by the United States Maritime Commission and War Shipping Administration into the lawfulness and reasonableness of railroad rates and practices which are competitive with those of domestic water carriers would be "a proceeding of great magnitude and complexity," the Interstate Commerce Commission has decided to hear oral argument on the question of whether or not it should launch such an inquiry. The argument will be held at the commission's Washington, D. C., offices on September 30, and briefs may be filed on or before September 16.

This plan of procedure in the case, docketed as Ex Parte No. 164, was announced in a notice issued by I. C. C. Secretary W. P. Bartel on July 26. On the same day, the commission made public a July 19 order, reopening for reconsideration more than 60 fourth-section proceedings wherein relief from the long-and-short-haul clause has been granted to railroads in connection with the maintenance of water-competitive rates. The order requires the railroads involved to show cause in formal returns due on or before September 9 "why an order or orders should not be entered vacating or modifying the outstanding fourth section orders of relief in each of the several proceedings." Replies to the railroad returns may be filed by any interested party not later than September 23.

"Unfair" Rates Itemized—The Bartel announcement and the commission's order follow the recent filing by U. S. M. C. and W. S. A. of an itemization of individual rail rates and practices which they contend are "unfairly competitive with domestic water carriers." The itemization came in the shipping agencies' June 28 response to a June 14 letter which I. C. C. Chairman Barnard had written them to set forth the commission's view that the original petition did not identify the assailed rates and practices with sufficient particularity (see *Railway Age* issues of June 22, page 1230, and July 13, page 67).

As Mr. Bartel pointed out the petition referred to "(1) depressed all-rail rates which depart from the long-and-short-haul provision of section 4 . . . under authority of fourth-section orders of the commission which granted relief from that provision because of water competition, and (2) all-rail rates which are depressed because of water competition but conform to the long-and-short-haul provision." Presumably the commission anticipates that the reopening of the fourth-section cases will provide the shipping agencies a means of pressing their attack on the first of these classes of "depressed" rail rates; and thus the September 30 oral argument will be concerned with the general question of the need for the

broad inquiry sought and questions of proper procedures for assailing "depressed" rates in the second of the foregoing classifications. "Nothing in this notice," said Secretary Bartel's announcement of the argument, "should be understood to relate to fourth-section applications referred to in the petition and subsequent correspondence."

"Magnitude and Complexity"—Meanwhile, the I. C. C. secretary had characterized the proposed investigation as a "proceeding of great magnitude and complexity," as noted above. "Before instituting such an investigation on its own motion," he continued, "the commission considers it desirable to obtain from interests which might be affected by this action expressions of views with respect to the general desirability and feasibility of such an investigation. Such expressions, it is believed, might properly deal with the question of whether the Interstate Commerce Act furnishes authority for granting petitioners relief in the manner and form which they seek, the specific sections of the act which should be invoked in such a proceeding, as well as suggestions concerning the scope thereof and means of expediting and facilitating the disposition of the proposed investigation if it is instituted."

Emergency Board in Pullman Wage Dispute

President Truman issued a July 27 Executive Order creating an emergency board to investigate the wage dispute between the Pullman Company and its conductors represented by the Order of Railway Conductors. As noted in the *Railway Age* of July 27, page 143, the dispute involves the application of the recent wage increase, and the union had called a strike for August 7.

Increased Prices on Southern Pine Car Material

Ceiling price increases of $8 per 1,000 board feet for shortleaf and longleaf Southern pine car material other than framing, and $5 per 1,000 board feet for framing, became effective July 26 under an Office of Price Administration authorization issued as Amendment No. 17 to Second Maximum Price Regulation 19—Softwood Lumber.

The action marked the first increase in maximum prices for car material since May 1, 1943; and the O. P. A. announcement said it was taken "in compliance with a directive of the economic stabilization director, based on a finding that adequate car material is not being produced under present prices." The announcement went on to say that the car material shortage, "according to representatives of operating railroads and car builders, has been due to the difference in price between these items and construction items made from Southern pine."

"The Office of Economic Stabilization, the Civilian Production Administration and the Office of Defense Transportation have expressed concern about this shortage," O. P. A. continued. "This lumber is needed for both construction of new cars to replace those which must be retired, and for repair of the increasing number of cars in bad order. Unless necessary replacements are made, the orderly flow of building materials and other commodities essential to the veterans' emergency housing program, as well as that of food for both domestic consumption and relief abroad, will be disrupted."

Minimum Car-Loading Orders Revised by O. D. T.

The Office of Defense Transportation this week revised its general order requiring the loading of all carload freight to not less than the marked capacity of the car except under certain conditions. Under the new order, General Order O.D.T. 18A Revised, the shipment of freight at carload rates is prohibited unless the quantity equals or exceeds the marked capacity of the car. The order, which becomes effective August 10, originally was issued on September 15, 1942, as General Order O.D.T. 18.

At the same time, O.D.T. tightened the requirements of its General Order O.D.T. 1, issued March 23, 1942, which calls for minimum loads of 20,000 lb. on all l.c.l. carload shipments in closed cars. Known as General Order O.D.T. 1 Revised, it supersedes General Order O.D.T. 1, and also becomes effective August 10.

Explaining the latter regulation, the O.D.T. said that the revised order prohibits any common carrier by railroad from accepting, loading or forwarding any car containing merchandise from or within any city unless the car is loaded to a minimum of 20,000 lb. It added that exceptions apply only to (1) cars loaded to full visible capacity; (2) peddler, pick-up and way cars; (3) trap or ferry cars when necessary to relieve freighthouse or transfer facilities when other means of transportation are not available; and (4) cars loaded with explosives.

The O.D.T. statement said that under the new order exemptions granted for l.c.l. shipments of war material, munitions and perishable goods are removed, adding that the requirements of the order also are extended to prohibit the movement of less than 20,000-lb. shipments of freight within a city except under conditions prescribed in the order.

More l.c.l. than 1943—The O.D.T. further pointed out that the total tonnage of l.c.l. freight now being shipped is running from 12 to 15 per cent higher than in 1943 and reported that l.c.l. shipments for the first five months of 1946 amounted to over 23,400,000 tons, an increase of 2,475,000 tons over the same 1943 period.

"The carriers are directed to disregard designated routings when necessary, to establish regular sailing days for merchandise cars, to alternate or stagger schedules and to submit for O.D.T. consideration plans for pooling traffic, service or revenue," the statement continued. "If insufficient merchandise is available to bring the load of a car up to the required minimum within 36 hours after the merchandise is received, the traffic must be diverted to another carrier."

The carriers are further required to report monthly within 20 days after the close of the month the number of cars, the total weight per car and the average weight per car of cars loaded. The O.D.T. said the provisions of the order are subject to any special or general permits previously issued under General Order O.D.T. 1 and still in effect. It added that any special permits issued under the previous order which do not bear an expiration date will expire on August 31.

Referring to General Order O.D.T. 18A Revised, the agency said that if the weight requirement cannot be met because of the nature of the shipment, the order requires that bulk freight in a closed car must be loaded to within 18 inches of the ceiling of the car. In addition, non-bulk freight in a closed car and any freight in an open car must be loaded so as to fully utilize car capacity.

Fewer Exemptions—The O.D.T. said that the revised order removes exemptions previously granted on carload freight shipments requiring refrigeration, heating or ventilation and exemptions which applied to commodities allocated or limited by government order such as war production materials. The exemptions under the revised order apply only to explosives, carload freight moving under "cleanout" or "remnant" rules or "concentration or gathering" rates and rules, to cars moving between points for the consolidation of shipments or to be stopped in transit to complete loading or unloading and to non-bulk freight moving in transit from a public warehouse. The exemptions are subject to conditions as defined in the order, the O.D.T. said.

The agency added that provision is made for the issuance of special directions, special permits and general permits and that those previously issued and still in effect will continue to be effective according to their terms until revoked. The order further requires that shippers must stamp or place a certificate on the face of the shipping instructions attesting that the order or such special directions, special permits or general permits as have been issued have been complied with unless the information in the shipping instructions clearly indicates compliance with the loading requirements of the order.

The O.D.T. announced that General Permit O.D.T. 18A-1 will continue in effect. The permit sets forth the weight requirements on shipments of textile bags, solid carbon dioxide, cement, coal in closed cars, empty gas cylinders, wooden egg case material, and on carload freight other than perishable freight loaded in single refrigerator cars under certain conditions. The agency also issued General Permits O.D.T. 18A Revised, 2 and 3, which exempt livestock, live poultry and cotton, respectively, from the requirements of the order. It revoked, effective August 9, General Permit O.D.T. 1-1, which exempted merchandise shipments to the armed forces from the requirements of General Order O.D.T. 1.

More news of the government agencies appears on page 211.

Materials and Prices

The following is a digest of orders, notices and information that have been issued by the Office of Price Administration, since July 25 and which are of interest to railways:

Building Equipment—Thousands of mechanical building equipment items, including hardware, screening, miscellaneous cast and sheet metal, heating and winter air conditioning, controls, valves and pipe fittings, piping accessories, mechanically operated commercial refrigeration and summer air conditioning and plumbing equipment have been suspended from price control in O. P. A. Amendment 37 to Supplementary Order 129, effective July 26.

Construction Materials—O. P. A. has amended an order covering construction materials not under price control, to clarify a misunderstanding on contract prices calculated before decontrol became effective in Amendment 56 to Order 1 under Regulation 592 effective July 26.

Fire Brick—Ceilings for insulating fire brick, used mainly for industrial purposes, have been raised 20.1 and 21.6 per cent by O. P. A. in Amendment 52 to Order 1 under Section 25 of Regulation 592, effective July 26.

Hardware—Increases ranging from 10 to 50 per cent over June 30, ceilings have been authorized by O. P. A. for manufacturers and resellers of specified items of hardware, hinges and butt hinges in Amendment 21 to Order 48 of Regulation 591, Amendment 9 to revised price schedule 40, Amendment 6 to Regulation 413, all effective July 26.

Hardwood Lumber—O. P. A. has increased ceiling prices for hardwood grade lumber produced in the North Central hardwood lumber region 6 per cent, under Amendment 23 to Regulation 155, effective July 26.

Lime—Ceilings for chemical, industrial and constructional lime have been raised $1 a net ton for producers east of the Rocky Mountains in O. P. A. Amendment 53 to Order 1 of Section 25 under Regulation 592, effective July 26.

Machinery—To provide basis for judging price trends in many machinery items suspended from price control, O. P. A. requires manufacturers who formerly filed list prices with the agency to continue to do so whenever a price is changed, in Amendment 34 to Supplementary Order 129, effective July 26.

Resins, Plastics, Rubber—O. P. A. has authorized manufacturers of synthetic resins, plastic materials and substitute rubber to apply for individual adjustments in their ceiling prices in Amendment 11 to Regulation 406, effective July 26.

Temperature Controls — Electric temperature controls for automatic water heaters have been increased 15 per cent in O. P. A. Amendment 20 to Order 1, under Regulation 591, effective July 26.

Supply Trade

C. W. Hagenbuch has been appointed assistant vice-president of the **Sheffield Steel Corporation,** Kansas City, Mo. Mr. Hagenbuch has been associated with the company for 26 years.

The **Simmons Company** has announced that, effective September 1, its textile selling agency, Rosemary Sales, will be designated as Simtex Mills. No changes in personnel or operating set-up are contemplated.

A. H. Adkins has been appointed southeastern sales manager of the Railway division of the **Morton Manufacturing Company,** Chicago, with headquarters at Bethesda, Md., succeeding **Carl H. Kadie,** who has retired.

Charles L. Reinhart, chief clerk of the manufacturing department in the New York offices of the **American Locomotive Company,** has retired after 40 years' service with the company. **H. P. Davison** has been appointed chief clerk to succeed Mr. Reinhart.

The **Irvington Car & Locomotive Co.,** P. O. box 90, Irvington 11, N. J., has been organized for the purpose of building custom built scale model railway equipment. **R. W. Scheubel,** formerly railway service engineer of the Elastic Stop Nut Corporation, Union, N. J., is chief engineer.

Alvin Haas has been appointed vice-president and general manager of the **American Well Works,** Aurora, Ill. Mr. Haas was formerly associated with the Yates American Machinery Corporation, where he served as general manager for the past 15 years. The appointment of **W. N. Remsburg** as chief engineer of American Well Works' Sanitary division has also been announced.

E. J. Towey has been appointed sales manager, industrial division, of the **Adel Precision Products Corporation,** Burbank, Calif. Mr. Towey, formerly executive vice-president in charge of sales, engineering, advertising and development of

E. J. Towey

new products for the Diamond Iron Works, Minneapolis, Minn., began his career as an accountant with the Hormel Meat Packing Company and later became general manager of the Fisher Nut & Chocolate Co. of Minneapolis.

The **Transport Products Corporation,** 120 South Campbell street, Louisville 6, Ky., has been formed to take over the signal division of the **Peerless Manufacturing Corporation** and the **Power Gates Company,** both of Louisville. Officers of the new corporation are: **T. Going,** president, formerly with the Peerless Manufacturing Corporation; **M. M. Dilley,** vice-president, formerly with the Power Gates Company, where he served in the same capacity; **J. E. Butler,** production manager; and **H. C. Bierbaum,** assistant production manager. **L. R. Zehnder** has been appointed chief engineer.

Victor E. Rennix, district sales manager of the **Electro-Motive division** of the **General Motors Corporation,** has been promoted to Chicago regional sales manager, with headquarters at Chicago, succeeding **Clyde A. Sattley,** who has retired. Mr. Rennix was born at Dublin, Ireland, and is a graduate of the Drexel Institute of Science and Industry at Philadelphia, Pa., and of the University of Pennsylvania. After working in various minor capacities with the Baldwin Locomotive Works he was advanced to zone sales manager and sales engineer, being promoted to district sales manager of the

Victor E. Rennix

New York region in 1937. Two years later Mr. Rennix became assistant district manager, with headquarters at Chicago. For one year beginning in 1942 he served with the War Production Board at Washington, D. C., returning to his former position in December, 1943. In February, 1944, Mr. Rennix joined Electro-Motive and was appointed to the position he held at the time of his new promotion.

United States Rubber Company's Koylon foam seating division has announced the appointment of **J. F. Cordell** as special sales representative for the Chicago area. His duties include the sale of both transportation mattresses and seating material to mid-western railroads. Prior to this appointment, Mr. Cordell was with the Army Air Forces as a navigator, with the rank of first lieutenant. Before his war service, he was employed five years by Bendix Products.

Reorganization and expansion of the **General Electric Company's** Apparatus Department's Special Products Division, calling for establishment of four separate sections and a marketing and promotion group, has been announced by Warren C. Hutchins, manager of the division. Under the expansion, a Laboratory Products Section will be responsible for pioneering sale of apparatus developed by the company's laboratories.

Other sections created are: a Power Rectifier Section, responsible for electronic equipment to deliver direct-current power for electrolytic processes, mines and rail-

ways; a Process Instrumentation Section, responsible for sale of equipments for measurement and control of a process; and an Educational Section, responsible for sale of all Apparatus Department products to educational institutions. In addition to the four new sections, a special group has been created for promotional activities of the Special Products Division.

Independent Pneumatic Tool Company, of Chicago, manufacturer of Thor portable pneumatic and electric tools, has announced the opening of a new branch sales office in St. Paul, Minn., located at 220 West Seventh street. It is managed by **Joseph A. Bell,** for the past six years sales representative of the company in that area. The new office will serve all of Minnesota, the eastern portions of North and South Dakota, northwest portion of Wisconsin, and the upper peninsula of Michigan.

J. Lester Perry, who rose from a steel plant clerk to the presidency of Carnegie-Illinois Steel Corporation, retired August 1 as head of this U. S. Steel subsidiary to become assistant to the president of **United States Steel Corporation.**

Mr. Perry, a native of Worcester, Mass., began his business career as a cost clerk in the Worcester operations of American Steel & Wire Company on his graduation from high school in 1899, two years before the United States Steel Corporation was formed. He was transferred to the operating end of the industry as a foreman of the cold rolling department in 1913. From then on he rose rapidly in the Worcester plants of American Steel & Wire through the positions of assistant superintendent and superintendent, becoming manager of the company's Worcester district in 1928. He was appointed vice president of the company in charge of operations in 1933, with headquarters in Cleveland, Ohio. Two years later Mr. Perry was elevated to the presidency of Tennessee Coal, Iron & Railroad Company, at Birmingham, Ala., another U. S. Steel subsidiary. On January 1, 1938, he became president of Carnegie-Illinois Steel Corporation, with headquarters in Pittsburgh.

Charles R. Cox on August 1 became president of Carnegie-Illinois, succeeding Mr. Perry. Mr. Cox has been president of National Tube Company, another U. S. Steel subsidiary, since March, 1943. Joining the National Tube Company as general superintendent, Ellwood Works, in 1934, Mr. Cox's rise in that company was rapid. In 1936 he was made vice-president in charge of operations; in 1941, executive vice-president; and 1943, was elected president of National Tube.

Born in Schenectady, N. Y., in 1891 and educated at New York university, Mr. Cox started his business career in 1914 with Marwick, Mitchell-Peet & Co., chartered accountants, New York. From 1918 to 1920 he was affiliated with the United States Shipping Board Emergency Fleet Corporation. In 1920 he came to Pittsburgh with the Crucible Steel Company of America, and from 1930 to 1934 was associated with Babcock & Wilcox Tube Company, Beaver Falls, Pa. Mr. Cox was in personal charge of the ordnance development at the Christy Park works of National Tube in McKeesport, Pa. In coordination with other plants of the company, Christy Park turned out 28 million pieces of ordnance, including shell forgings, finished shells and bombs of all types for the Army and Navy both before and during the last war. It was under his immediate direction that tremendous quantities of large size seamless pipe for both the "Big Inch" and "Little Big Inch" petroleum pipe lines were produced in record time at the Lorain, Ohio, works of the company, and that aircraft and other specialty tubing production was stepped up in plants at Gary, Ind., and Ellwood City, Pa.

Robert A. Lancaster has been appointed regional sales manager of the **Budd Company,** San Francisco, Calif. Mr. Lancaster is a graduate of the engineering school at the University of Virginia. He joined Budd in 1933, when he worked at various jobs in its railroad shops during the building of the "Pioneer Zephyr". He served as service engineer for several of Budd's early stainless steel trains, later becoming contact engineer on the sales staff.

Robert A. Lancaster

During the war he represented the company's war service division on the west coast and became railway district sales manager at the war's termination.

Plans of **Corning Glass Works** for a pilot plant especially designed to facilitate the manufacture of new products and to develop new manufacturing methods, have been made public by William C. Decker, president of the company. The new plant, first of its kind in the glass industry, will be located in Corning, N. Y. This represents the company's third post-war step in a long-term expansion and improvement program which began last fall with the purchase of new manufacturing facilities in Canada. Another unit in West Virginia, operated under lease during the War, has also been recently purchased from the War Assets Administration.

Appointment of Wabash Equipment & Supply Company, 310 Test building, 54 Monument circle, Indianapolis, Ind., as distributor of Davey compressors, has been announced by the **Davey Compressor Company.** Wabash will offer complete sales and service facilities on all items of Davey manufacture. Its distributorship setup includes Davey portable and stationary compressors, truck power take-offs, Auto-Air and Track-Air units, mobile machine shops, power saws and portable lighting equipment. Wabash was founded in April by R. W. "Bill" Schwartz following his return from 40 months service in the U. S. Navy. Present plans call for establishment of a sales and service branch in Ft. Wayne, and at another southwestern Indiana location, in the near future.

OBITUARY

Carlos Dorticos of Chicago, retired transportation specialist of the General Electric Company, died July 25, at Portland, Maine.

Elmer George Knapp, purchasing agent, General Railway Signal Company, died in Rochester, N. Y., July 22, after an illness of several months. Mr. Knapp was born in Rochester March 30, 1891, and attended the grade and high schools there. He graduated from the Rochester Institute of Technology in 1911, and joined the Peerless Check Protection Co. as draftsman, later engaging in toolmaking and purchasing. In 1916 he accepted a position as purchasing agent of the Davis Machine Tool Co. of Rochester, leaving them in 1920 to go with the Rochester Folding Box Co. as purchasing agent. In 1925 Mr. Knapp was employed by the General Railway Signal Co. as assistant purchasing agent, later advancing to purchasing agent, in which position he remained until his death.

Ross M. Blackburn, district manager at Chicago for the Buda Company, died at the Presbyterian hospital in that city on July 25, following an operation. Mr. Blackburn was born at Arlington, Neb., in 1882 and after a public school education at that point entered the service of the Chicago & North Western in 1902, subsequently becoming general storekeeper at

Ross M. Blackburn

Chicago. He left the North Western on January 1, 1926, to enter the sales department of the Buda Company, with headquarters at Chicago, being advanced to district manager with the same headquarters in 1934. Mr. Blackburn was a past president of the Track Supply Association, having served in this capacity in 1942, and was a director of the association at the time of his death.

Financial

ATLANTA & ST. ANDREWS BAY.—*Promissory Notes.*—Division 4 of the Interstate Commerce Commission has vacated its April 15, 1943, order in Finance Docket No. 14157 which authorized this road to issue $500,000 of promissory notes, the proceeds of which were to be applied toward the cost of relaying rail, as noted in *Railway Age,* April 24, 1943, page 845. The commission's vacating order of July 18 noted that the applicant had advised that the work of relaying the rail has been completed and that it now finds it unnecessary to issue the notes.

CHARLESTON & WESTERN CAROLINA.—*Bonds.*—This road has applied to the Interstate Commerce Commission for authority to sell at par, without competitive bidding, to the Atlantic Coast Line, its parent company, $2,720,000 of series B first consolidated mortgage 5 per cent bonds, the proceeds of which would be applied toward the redemption of a similar amount of first mortgage five per cent bonds due October 1. The proposed issue would mature October 1, 1964.

CHESAPEAKE & OHIO.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to assume liability for $1,750,000 of equipment trust certificates to finance in part the acquisition of 790 50-ton all-steel hoppers at a total cost of $2,246,049. The certificates would be dated August 1 and would mature in 10 equal annual installments starting August 1, 1947. They would be sold by competitive bidding, the dividend rate not to exceed 1¾ per cent.

CHICAGO, BURLINGTON & QUINCY. — *Promissory Notes.*—Division 4 of the Interstate Commerce Commission has authorized this road to issue $2,020,480 of 1.5 per cent promissory notes to further evidence the indebtedness it will assume under a conditional sales agreement by which it plans to purchase 28 Diesel-electric switching locomotives from the Electro-Motive Division of the General Motors Corporation at an estimated aggregate cost of $2,525,600, subject to increase. The agreement will be dated July 1 and the equipment will be delivered not later than November 30. The transaction will be financed by the Northern Trust Company and the Manufacturers & Traders Trust Company of Buffalo, N. Y.

DETROIT, TOLEDO & IRONTON.—*Notes.*—This road has applied to the Interstate Commerce Commission for authority to issue and sell $2,000,000 of serial notes, the proceeds of which will be applied, together with treasury funds, toward the redemption on October 1 of a similar amount of 10-year serial notes, leasing $2,000,000 as the entire outstanding amount after that date. The applicant said it intends to make separate arrangements for paying the $400,000 principal amount which also matures October 1.

MISSOURI-KANSAS-TEXAS. — *Adjustment Bond Interest.*—Directors of this road have authorized the payment on October 1 of two coupons of its adjustment bonds, representing one full year's interest (at 5 per cent) on the outstanding adjustment mortgage bonds for the period ended on June 30, 1939.

MISSOURI PACIFIC - ST. LOUIS SOUTHWESTERN-CHICAGO, ROCK ISLAND & PACIFIC.—*Operating Agreement.*—Division 4 of the Interstate Commerce Commission has authorized these roads, proprietors of the Arkansas & Memphis Railway Bridge & Terminal, to enter an agreement supplemental to an existing agreement for use of the A. & M.'s bridge and other properties. As noted in *Railway Age,* May 11, page 978, the modification will make the agreement conform to the changed situation resulting from redemption by A. & M. of its former first mortgage bonds on September 1, 1945, and the issuance on that date of $2,865,000 of first mortgage serial bonds. In approving the transaction, the commission imposed employee-protection as set forth in the Interstate Commerce Act's section 5(2).

NEW YORK, ONTARIO & WESTERN.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to sell to the Reconstruction Finance Corporation $2,600,000 of 3 per cent 10-year equipment trust certificates, the proceeds of which will be applied toward the payment of $2,908,500 for 27 Diesel-electric locomotives, including 23 1,000-hp. switching locomotives, two 2,700-hp. freight locomotives and two 1,500-hp. freight locomotives.

NEW YORK, SUSQUEHANNA & WESTERN. — *Reorganization Expenses.* — The Interstate Commerce Commission, in a report on reconsideration, has affirmed the February 5 report and order of its Division 4 which fixed $1,000 as the maximum limit of allowances to be paid to Edith A. Merritt for expenses incurred in connection with the reorganization of this road. The petitioner sought an allowance of $20,620 as compensation for expenses and $4,457.52 as reimbursement for expenses. At the same time, the commission upheld Division 4's report and order in the same proceeding, Finance Docket No. 11681, in which it denied W. L. Gold and Morton Frederick any allowances. The commission found that "the services of these petitioners (Gold and Frederick) did not benefit the estate or contribute to the reorganization."

PITTSBURG, SHAWMUT & NORTHERN.—*Reorganization.*—This road, which has been in receivership since August 1, 1905, has notified the Interstate Commerce Commission that it is petitioning in the United States District Court for the Western District of Pennsylvania for authority to effect a reorganization under the provisions of Section 77 of the Bankruptcy Act. The applicant reported that its current liabilities for operating expenses total approximately $500,000 and that it has no funds available for the discharge of this debt, adding that it is "hopelessly insolvent" and "unable to meet its debts as they mature." The road said that as of April 30 it had total liabilities of $42,917,151, plus $15,000,000 in outstanding capital stock. It estimated the salvage value of the assets at $1,407,067 and noted that during the past five years its operating losses have increased from a deficit of $487,010 in 1941 to a deficit of $901,046 in 1945.

PERE MARQUETTE. — *Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $850,000 of 1½ per cent serial equipment trust certificates, the proceeds of which will be applied toward the payment of $1,083,874 for equipment, including 150 50-ton all-steel automobile box cars and 50 50-ton all-steel automobile box cars specially equipped for loading auto parts. The certificates will mature in 10 equal annual installments starting July 15, 1947. They have been sold at 99.636 to the Savings Bank of Baltimore. On this basis, the average annual cost will be approximately 1.57 per cent.

SOUTHERN PACIFIC. — *Extension of Trackage Rights.*—Division 4 of the Interstate Commerce Commission has again modified its February 26, 1935, order in Finance Docket No. 10375, thus further extending until June 30, 1971, the period during which this road is authorized to operate, under trackage rights, over part of the Yuma Valley, owned by the United States Reclamation Service.

UNION.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to assume liability for $1,500,000 of equipment trust certificates, the proceeds of which will be applied toward the payment of $2,000,000 for 500 70-ton hopper cars. The certificates, to be sold on the basis of competitive bids, would be dated September 1 and would mature in 10 equal annual installments of $150,000 starting September 1, 1947.

WESTERN PACIFIC.—*Refunding.*—The Interstate Commerce Commission, following reconsideration and oral argument in Finance Docket No. 14989, has affirmed Division 4's April 11 report which attached certain conditions to its approval of this road's application for authority to issue $10,000,000 of first mortgage series B bonds, due January 1, 1981, the proceeds to be applied toward the redemption of a similar amount of 4 per cent first mortgage series A bonds, due January 1, 1974. As noted in *Railway Age* of April 20, page 848, Division 4 withheld issuance of an order approving the transaction until the applicant filed written acceptance of conditions stipulating that its reserve funds of $5,400,500 for estimated 1945 income tax liabilities, and $10,100,000 for contingent tax liability, be held intact and balances not needed for those specific purposes be paid as additional amounts into the sinking fund, together with any remaining balances of a $5,300,000 fund set aside to redeem general mortgage income bonds called for redemption. Another condition required the applicant to make a showing that it has obtained a satisfactory sales price and interest rate for the series B bonds. The series A bonds are now held by the Reconstruction Finance Corporation.

The applicant contended that disposition of any balances remaining of the reserve

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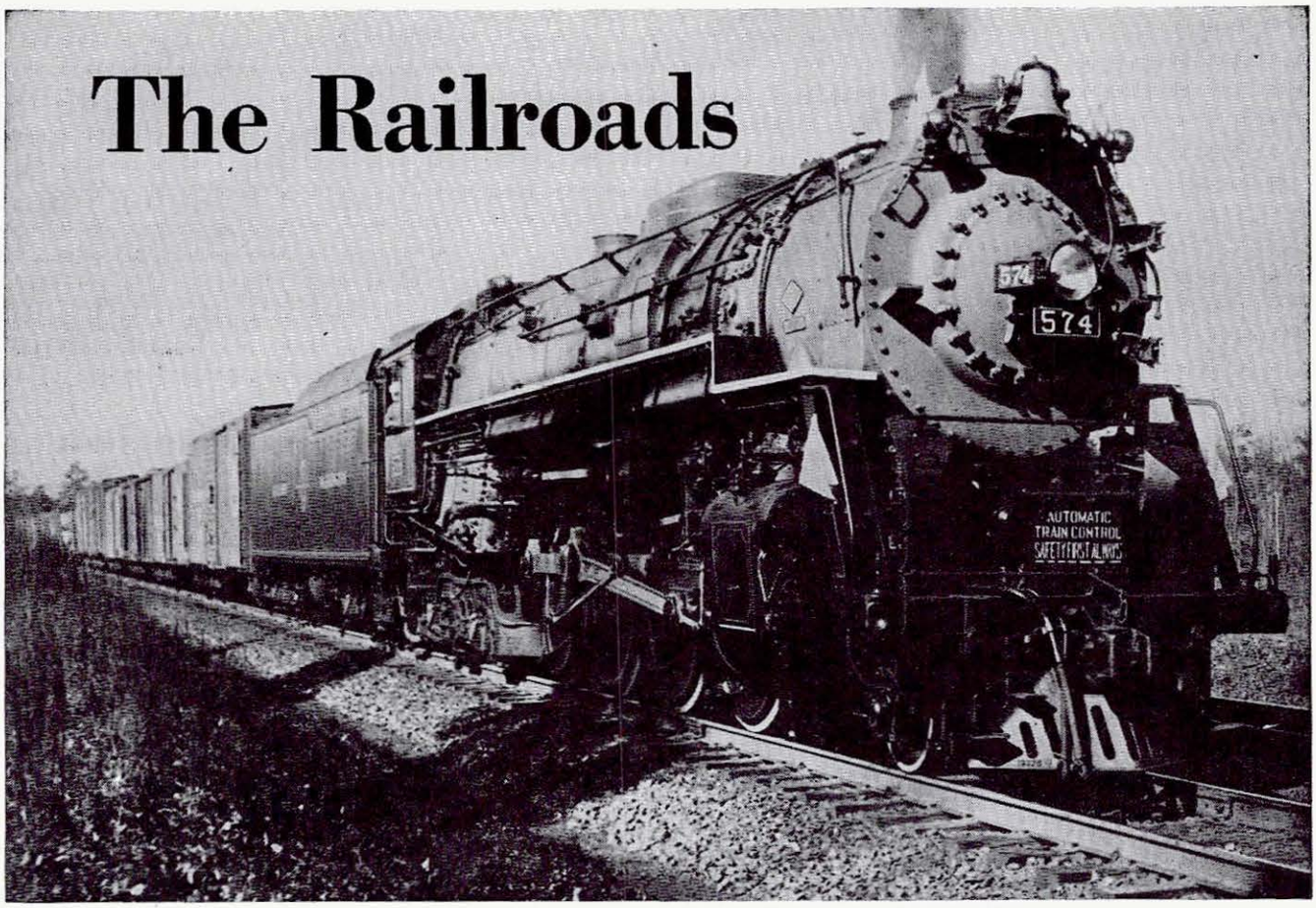


must always look far ahead

Traffic demands must be anticipated for long periods in advance because equipment cannot be built "overnight". So versatile motive power is especially important — locomotives capable of speeding passenger traffic or handling heavy freights with equal facility and economy of operation.

Lima-built modern steam locomotives meet these requirements, and provide the superior performance that results from Lima's insistence upon the highest standards of design, workmanship and materials.

LIMA LOCOMOTIVE WORKS INCORPORATED, LIMA, OHIO

funds was a matter to be decided by its board of directors and that it was not within the power of the I. C. C. to affix a condition with respect to the use of such funds. The commission rejected the contention, asserting its power, under the Interstate Commerce Act's section 20a, to impose the conditions, and maintaining that they were warranted by the financial history of the applicant's property and the "obvious desirability" of extinguishing or reducing fixed-interest debt as rapidly as possible. The commission rejected the contention, asserting its power, under the Interstate Commerce Act's section 20a, to impose the conditions, and maintaining that they were warranted by the financial history of the applicant's property and the "obvious desirability" of extinguishing or reducing fixed-interest debt as rapidly as possible.

Commissioner Patterson dissented, while Commissioner Aitchison did not participate in the disposition of this case.

Average Prices Stocks and Bonds

	July 30	Last week	Last year
Average price of 20 representative railway stocks	60.78	59.88	55.15
Average price of 20 representative railway bonds	97.15	97.41	98.11

Dividends Declared

Alabama & Vicksburg.—Semi-annually, $3.00, payable October 1 to holders of record September 9.

Delaware & Hudson.—Quarterly, $1.00, payable September 20 to holders of record August 28.

Louisville, Henderson & St. Louis.—Common, semi-annually, $4.00, payable August 15 to holders of record August 1.

Reading. — 4% non-cumulative first preferred, quarterly, 50c, payable September 12 to holders of record August 22.

Southern.—Quarterly, 75c, payable September 16 to holders of record August 15.

Vicksburg, Shreveport & Pacific. — Common, semi-annually, $2.50, payable October 1 to holders of record September 9.

Abandonments

BAY POINT & CLAYTON.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon its entire line, extending from a connection with the Atchison, Topeka & Santa Fe at Port Chicago, Calif., to Cowell, 9 miles.

SACRAMENTO NORTHERN.—This road has applied to the Interstate Commerce Commission for authority to abandon 4,080 feet of track, all of which is located within the city limits of Woodland, Calif.

ST. LOUIS-SAN FRANCISCO.—Division 4 of the Interstate Commerce Commission, in a report on further hearing, has modified its order of July 28, 1942, in which it permitted this road to abandon 91.1 miles of track in Arkansas and Oklahoma, to include, effective July 7, 1942, employee-protection conditions similar to those prescribed in the precedent-setting Burlington case, 257 I.C.C. 700.

WINONA.—This electric road has applied to the Interstate Commerce Commission for authority to abandon that portion of its line between Warsaw, Ind., and a point near Peru, approximately 41 miles.

Equipment and Supplies

Alco Output Nears 75,000

The 75,000th locomotive to be built by the American Locomotive Company will be completed at Schnectady, N. Y., in September, R. B. McColl, president, has announced. Locomotive serial number 75,000 has been assigned to a new 6,000-hp. Diesel-electric road locomotive, a lineal descendant of the company's first Diesel-electric, built in 1925 and still in daily service on the Central of New Jersey.

The company's first locomotive, the "Sandusky," was built at Paterson, N. J., in 1837, and was placed in service a year later on the Mad River & Lake Erie, running between Bellevue and Sandusky, Ohio, 16 miles. Locomotive Number 50,000, a Pacific, was delivered to the Erie in 1911. At the time this was the largest Pacific type ever built. It is still in service on the Erie commuter run between Jersey City and Tuxedo, N. Y. The railroad recently considered scrapping it, according to the builder's announcement, but commuters who had grown fond of the old locomotive made such a vigorous protest that it will be continued in service after a complete overhaul.

FREIGHT CARS

The GREAT NORTHERN is inquiring for 500 50-ton box cars.

The GRAYSONIA, NASHVILLE & ASHDOWN is inquiring for 50 70-ton hopper cars.

The DETROIT & TOLEDO SHORE LINE is inquiring for 50 70-ton covered hopper cars.

The UNION PACIFIC has placed an order with the American Car & Foundry Company for 500 50-ton automobile cars which will be built at the plant in St. Louis, Mo.

The CHICAGO & NORTH WESTERN has ordered 140 70-ton covered hopper cars from the Bethlehem Steel Company. Inquiry for this equipment was reported in the *Railway Age* of June 22, page 1237.

The LOUISVILLE & NASHVILLE has placed an order with the American Car & Foundry Company for 750 50-ton, 33-ft. steel twin hopper cars. This equipment will be constructed at American's Madison, Ill., plant.

SIGNALING

The General Railway Signal Company is furnishing 10 sets of intermittent inductive train control equipment, for installation on Diesel-electric locomotives being built by the American Locomotive Company for the GULF, MOBILE & OHIO.

The General Railway Signal Company is furnishing 12 sets of intermittent inductive train control equipment, for installation on Diesel-electric passenger locomotives being built by the Baldwin Locomotive Works for the SOUTHERN.

NEW BAG FOR AIR CARGO.—Air cargo ranging from eggs to hardware can be dropped from a speeding plane without damage in a new rubber mail bag, according to the United States Rubber Company, which has developed it for carrying air mail to communities off the beaten path.

The bag, heavily reinforced to withstand severe punishment, may be picked up or dropped in small areas without a landing. Special equipment is used to pick up the mail bag from the ground. A loop, mounted on two vertical poles, is attached to one end. A hook trailing behind the plane grabs the loop and lifts the bag into the air, after which it is pulled into the plane by an electrically-powered reel.

Construction

The CHICAGO & NORTH WESTERN has awarded a contract to the Ross and White Company, Chicago, for the designing and building complete in operation of a four-track 300-ton capacity automatic electric, shallow-pit, skip-bucket type locomotive coaling plant at Nelson, Ill.

DELAWARE & HUDSON.—This road has awarded a contract for the reconstruction of its locomotive coal and sand handling facilities at Oneonta, N. Y., to the Roberts & Schaefer Co. of Chicago, at an estimated cost of $107,895.

DENVER & RIO GRANDE WESTERN.—This road has awarded a contract, amounting to $50,608, to Harry H. Herman, Denver, Colo., for the installation of air-conditioning equipment in the Rio Grande building, Denver.

FLORIDA EAST COAST.—This railroad has authorized the following project, the work to be performed by the company's own forces, at an estimated cost of $67,700; replacement of 418-ft. ballast deck bridges in northbound and southbound main tracks with 271-ft. open deck bridges and fill, at Deerfield, Fla.

LONG ISLAND.—This road has awarded a contract to the Fortis Contracting Company, Inc., for the elimination of a grade crossing and the construction of a pedestrian footbridge at 51st avenue and Third street, Long Island City, N. Y. The estimated cost of the project is $26,874.

NEW YORK, NEW HAVEN & HARTFORD.—This road has authorized the revision of Diesel locomotive facilities at Cedar Hill, Conn., at an approximate cost of $35,000.

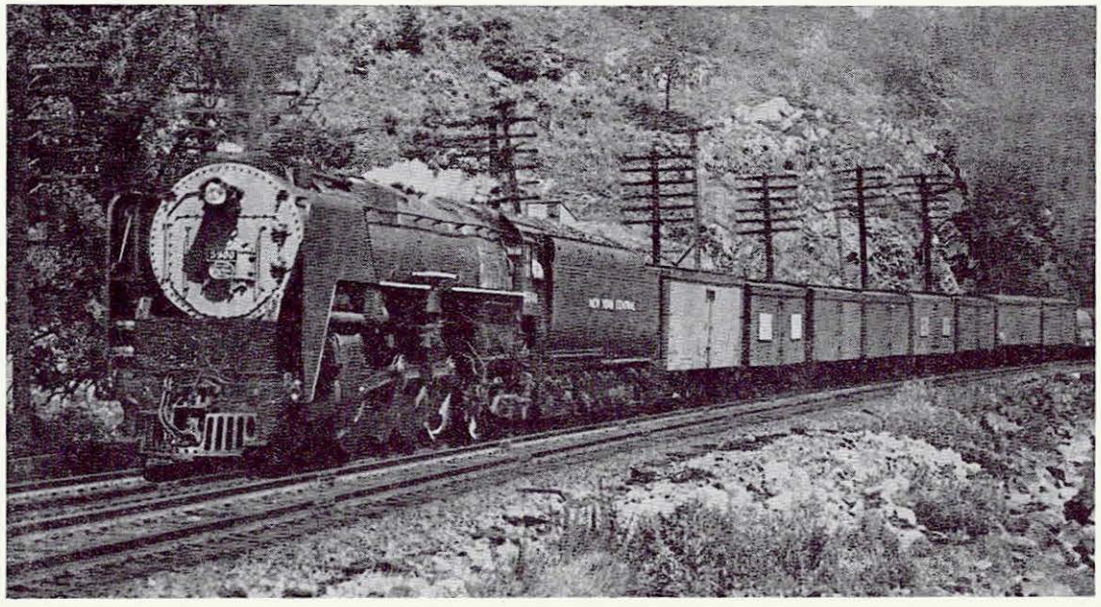
READING.—This road has awarded a contract for the relocation of highway and railroad necessitated by the extension of its engine house at Rutherford, Pa., to the J. C. Shawfield Company, Harrisburg, Pa., at an estimated cost of $65,000.

SPOKANE, PORTLAND & SEATTLE.—This road has awarded a contract to the Morrison-Knudsen Company, Boise, Idaho, for the grading work on a 4,000-ft. extension to the Oregon Electric at Foster, Ore. This project, involving a grade separation with the South Santiam highway and a steel truss over Wiley creek, will cost approximately $100,000.

News Department continued on next left-hand page

...from the New York Herald Tribune

New York Central Testing Special Locomotive



The latest New York Central locomotive of the Niagara type, specially equipped with multiple exhaust and inlet poppet-type valves, shown in operation on the Hudson division testing this form of equipment in comparison with conventional piston-type valve operation.

This locomotive, New York Central's No. 5500, is the latest to be equipped with the Franklin System of Steam Distribution.

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Railway Officers

EXECUTIVE

Fred S. Howard, assistant to the vice-president of the Southern Pacific, with headquarters at San Francisco, Cal., has retired after more than 46 years of service. Mr. Howard was born at Baldwinsville, N. Y., on June 5, 1876, and is a graduate of Stanford university. He entered railway service in March, 1900, as a rate clerk at San Francisco, subsequently holding various positions, including that of chief rate clerk until December, 1923, when he was advanced to assistant general passenger agent, with the same headquarters. In July, 1925, Mr. Howard was promoted to assistant to the passenger traffic manager, and two years later he became assistant passenger traffic manager. In November, 1929, he was promoted to the position he held at the time of his retirement.

Charles J. Brister, whose retirement as vice-president, freight traffic, of the New York Central, was announced in the July 6 issue of *Railway Age,* was born on June

Charles J. Brister

22, 1875, at Dayton, Ohio, and entered railroad service in 1890, with the Dayton, Fort Wayne & Chicago (now the Baltimore & Ohio). He subsequently held clerical positions with the Union Pacific, the Chicago & North Western, and the Cleveland, Cincinnati, Chicago & St. Louis. In 1900, he was advanced to assistant general freight agent for the Big Four at Cincinnati, Ohio, where he was later promoted to general freight agent in 1907 and to traffic manager in 1914. In 1920, Mr. Brister became assistant vice-president of the New York Central at Chicago, and in 1930 he assumed the post from which he retired on July 1.

Lawrence B. Burford, whose retirement as assistant vice-president of the Erie, with headquarters at New York, was announced in the July 6 *Railway Age,* was born at Washington, D. C., on October 29, 1879, and attended the University of Chicago. He began his career in railroading in 1902 as clerk in the freight office of the Erie at Chicago, where he served in various clerical capacities until 1908, when he became chief of tariff bureau, transferring to New York in 1910. He advanced consecutively to general agent at Baltimore, Md., in 1911; assistant to general traffic manager at New York in 1915; furloughed for war service to the British Ministry of Shipping at New York from

Lawrence B. Burford

1917 to 1919; assistant general freight agent at New York in 1919; general freight and passenger agent at Hornell, N. Y., in 1920; general freight agent at New York in 1922; and assistant freight traffic manager at New York in 1928. Mr. Burford became freight traffic manager at Cleveland in 1931, then in 1939 was appointed to the vice-presidency from which he retired on June 30.

Frederick W. Okie, whose appointment as president of the Union Railroad Company at Pittsburgh, Pa., was announced in the July 27 issue of *Railway Age,* was born at Dayton, Ohio, on June 7, 1907, and is a graduate of the Virginia Military Institute. He entered railway service on June 20, 1924, working during summer school vacations in the engineering department of the Southern. On July 1, 1929, he was appointed a student apprentice and one year later he was advanced to assistant trainmaster, with head-

Frederick W. Okie

quarters at Oakdale, Tenn. On September 1, 1933, Mr. Okie was promoted to trainmaster, with the same headquarters, and in 1936 he was transferred to Birmingham, Ala. On February 1, 1938, he was advanced to division superintendent, working in this capacity on various divisions until 1942 when he entered the armed services as commanding officer of the Southern-sponsored and trained 727th Military Railway Operating Battalion, subsequently serving in North Africa, Sicily, Italy, France, and Germany. He returned to his former post with the Southern in January, 1946, and was advanced to general manager, western lines, at Cincinnati, Ohio, in March, maintaining the latter position until his new appointment became effective on August 1.

Guy R. Buchanan, assistant general manager of the Coast Lines of the Atchison, Topeka & Santa Fe, at Los Angeles, Cal., has been advanced to assistant to the operating vice-president, with headquarters at Chicago, succeeding **Obra L. Gray,** whose promotion to general manager of the Eastern Lines is reported elsewhere in this issue.

Alfred Blauel, whose appointment as assistant vice-president of the Erie at New York was announced in the July 6 issue of *Railway Age,* was born at Dessau, Germany, and educated in Chicago, where he began his railway career in 1905 as a stenographer for the Erie. He served in various clerical capacities there until 1918, when he became chief of tariff bureau.

Alfred Blauel

Remaining at Chicago, he advanced successively through the posts of assistant general freight agent in 1929, general freight agent in 1932, assistant freight traffic manager in 1939, and freight traffic manager in 1945. Mr. Blauel held that post at the time of his promotion to assistant vice-president, which became effective on July 1.

FINANCIAL, LEGAL AND ACCOUNTING

J. Stevenson, freight claim agent of the Canadian Pacific, with headquarters at Calgary, Alta., has retired after 40 years of service.

H. H. McLean, commerce counsel of the New York Central, has been appointed assistant general counsel, with headquarters as before at New York. **C. R. Hulsart, Jr.,** has been named assistant to general counsel.

News Department continued on next left-hand page

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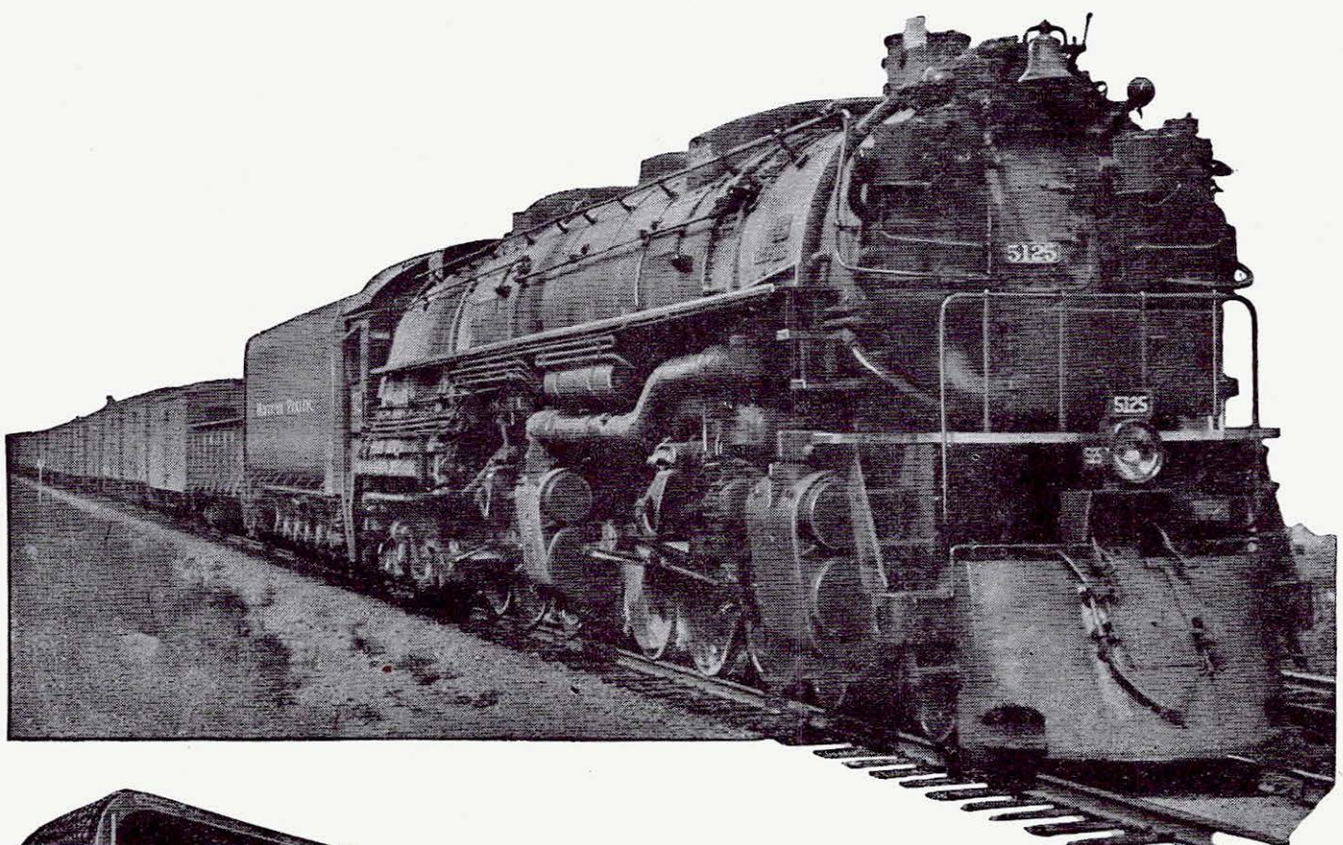

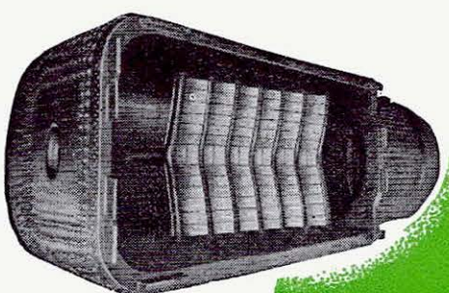

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SECURITY CIRCULATOR DIVISION

OPERATING

J. T. Davis, trainmaster on the Missouri Pacific, at Harlingen, Tex., has been promoted to superintendent of terminals, with headquarters at Houston, Tex., succeeding **O. J. Brown,** who has retired after 41 years of service.

D. E. Crouser, trainmaster of the Texas & Pacific at Ft. Worth, Tex., has been promoted to assistant division superintendent, with the same headquarters, succeeding **A. C. Ogg,** who has been assigned to other duties. **A. C. LaCroix** has been appointed trainmaster at Ft. Worth, replacing Mr. Crouser.

G. E. Lanning, trainmaster of the Chicago, Milwaukee, St. Paul & Pacific, at Marion, Iowa, has been promoted to assistant division superintendent, with headquarters at Perry, Iowa, succeeding **C. E. Crippen,** whose appointment as chairman of the Milwaukee's newly-formed "President's Committee" is reported elsewhere in this issue. **A. C. Novak,** trainmaster at Kansas City, Mo., has been transferred to Ottumwa, Iowa, relieving **W. T. Stewart,** who in turn has been transferred to Marion, replacing Mr. Lanning.

E. Rogers Oliver, Jr., whose appointment as superintendent of the Southern with headquarters at Winston-Salem, N. C., was announced in the *Railway Age* of July 27, was born on June 23, 1914, at Louisville, Ky., and was graduated from the University of Maryland in 1937. He entered railway service in 1938 as a student apprentice for the Southern, becoming assistant supervisor in 1940 and assistant trainmaster in 1941. Mr. Oliver was advanced to trainmaster in 1942, and

E. Rogers Oliver, Jr.

served in that post at Selma, Ala., and Birmingham. He was named assistant superintendent at Sheffield, Ala., on March 1, 1946, which post he maintained until his recent appointment became effective on August 1.

Robert H. McGraw, assistant to the vice-president of the New York Central at Chicago, has been promoted to general manager of the Indiana Harbor Belt and the Chicago River & Indiana (parts of the New York Central System), with headquarters at Gibson, Ind., succeeding **T. L. Green,** who has resigned to become a member of Division I of the National Railroad Adjustment Board, with headquarters at Chicago. A biographical sketch on Mr. McGraw appeared in the *Railway Age* of July 20 in connection with his promotion to his previous position.

Obra L. Gray, assistant to the operating vice-president of the Atchison, Topeka & Santa Fe at Chicago, has been promoted to general manager, Eastern Lines, with headquarters at Topeka, Kan., succeeding **H. B. Lautz,** who has retired after 56 years of service.

Mr. Gray was born at Sedgwick, Kan., on October 5, 1891, and entered railway service with the Santa Fe in 1909 as a file clerk at Los Angeles, Cal. He subsequently held various minor positions until 1927, when he was promoted to trainmaster, with

Obra L. Gray

headquarters at Gallup, N. M., becoming superintendent of the Albuquerque division at Winslow, Ariz., in 1936. In 1941 Mr. Gray was advanced to assistant general manager of the Coast Lines, and one year later he was promoted to the position he held at the time of his new appointment.

The New York Central System (including the Cleveland, Cincinnati, Chicago & St. Louis and the Michigan Central) has announced a number of important officer and personnel changes which include the following: **D. A. Fawcett,** assistant general manager at Indianapolis, Ind., has been promoted to manager of freight transportation, with headquarters at New York; **Frank McElroy,** assistant general manager at Detroit, Mich., becomes general manager of the Michigan Central district, with the same headquarters. **R. F. DeForset,** division superintendent at Detroit, has been advanced to assistant general manager, succeeding Mr. McElroy. **B. D. Maltby,** assistant division superintendent at Toledo, Ohio, has been promoted to division superintendent, with headquarters at Jackson, Mich., relieving **A. W. Laskoske,** who has been transferred to Detroit, replacing Mr. DeForest. **E. J. Gibbons,** division superintendent at Toledo, has become assistant general manager of the Big Four district, with headquarters at Indianapolis, and **W. G. Chase,** trainmaster at East St. Louis, Ill., has been advanced to assistant to the assistant general manager, with headquarters also at Indianapolis. **T. W. English,** division superintendent, has been advanced to assistant to the assistant general manager, with headquarters as before at Indianapolis, and **J. A. Nichols,** manager of the Cincinnati Union Terminal, has been appointed division superintendent at Indianapolis, succeeding Mr. English. **W. E. Kamm,** assistant division superintendent at Springfield, Ohio, has been promoted to superintendent of the Ohio Central division, with headquarters at Columbus, Ohio, relieving **J. H. Spooner,** who has been transferred to the Toledo division, with headquarters at Toledo, succeeding Mr. Gibbons. **J. D. King,** assistant to the assistant general manager at Indianapolis, has been advanced to assistant superintendent of the Ohio division, with headquarters at Springfield, and **W. F. Davis,** assistant to the assistant general manager at Cleveland, Ohio, has been promoted to assistant superintendent of the Western division, with headquarters at Elkhart, Ind. **E. C. Johnson,** assistant superintendent of the Western division at Chicago, has been transferred to the Toledo division, with headquarters at Toledo. **L. M. Riley,** assistant trainmaster at Linndale, Ohio, has been advanced to trainmaster of the Illinois Division, with headquarters at East St. Louis.

Edward T. Gallagher, whose promotion to superintendent of transportation of the Western Pacific, with headquarters at San Francisco, Cal., was reported in the *Railway Age* of July 13, was born at Covington, Ind., on April 7, 1886. He entered railway service in February, 1903, as a telegrapher on the Pennsylvania, working in that capacity at various points until 1905, when he went with the Wabash as a telegrapher at Montpelier, Ohio. One year later Mr. Gallagher became a telegrapher

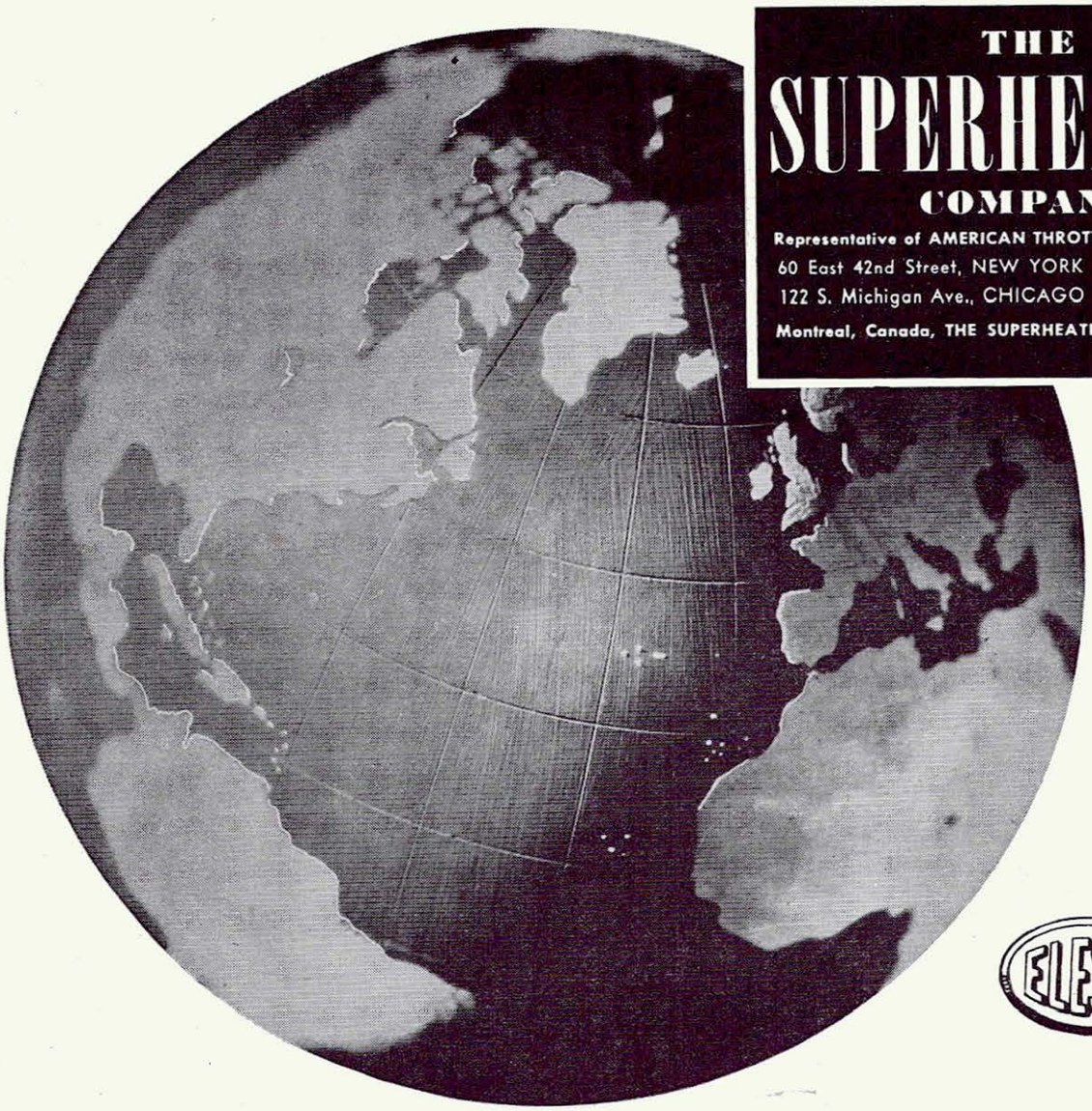
Edward T. Gallagher

and car distributor on the Union Pacific, with headquarters at Omaha, Neb., and in 1907 he went with the Southern Pacific as a telegrapher-ticket agent at Oakland, Cal. He joined the Western Pacific in 1911, serving consecutively as telegrapher, car distributor, dispatcher, night chief dispatcher and chief dispatcher until 1942, when he was promoted to assistant superintendent of transportation, the position he held at the time of his new appointment.

Anton Anderson, assistant chief operating officer and chief engineer of the

News Department continued on next left-hand page

The World's Standard for STEAM SUPERHEATERS ...*Elesco*



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Chicago, Indianapolis & Louisville at Lafayette, Ind., has been appointed general superintendent, with the same headquarters. He will continue to serve as chief engineer. The position of assistant chief operating officer has been abolished.

John P. Quigley, whose retirement as superintendent of transportation and telegraph of the Western Pacific was reported in the *Railway Age* of July 13, was born at Wabasha, Minn., on May 1, 1868, and entered railway service in September, 1887, as a telegrapher on the Chicago, Burlington & Quincy. He subsequently held several minor positions until 1907 when he went with the Chicago, Rock Island & Pacific as chief dispatcher, with headquarters at Trenton, Mo. Mr. Quigley was later transferred to Eldon, Iowa, and Little Rock, Ark., and in March, 1909, he was advanced to trainmaster at the latter point. On March 1, 1910, he resigned to go with the Western Pacific as chief dispatcher at Sacramento, Cal., and one year later he became car accountant and superintendent of telegraph, with headquarters at San Francisco, Cal. On August 1, 1916, he was promoted to division superintendent at Sacramento, and in September, 1919, he was advanced to the position he held at the time of his retirement.

TRAFFIC

Arthur E. Baylis, whose appointment as assistant general freight traffic manager of the New York Central, with headquarters at New York, was announced in the *Railway Age* of July 27, was born April 9, 1910, at Colorado Springs, Col. He was graduated from Colorado College in 1932 and then acted as instructor in economics and transportation at Tufts college, Medford, Mass., until 1934, when he was granted an M. A. degree. After serving briefly on the staff of Federal Coordinator of Transportation at Washington, D. C., he joined the New York Central on February

Arthur E. Baylis

15, 1935, as research clerk, office of vice-president, traffic. After appointments as staff assistant and chief clerk he was promoted to assistant to vice-president, traffic, in June, 1939. He was granted a furlough on June 1, 1942, to go with the Office of Defense Transportation as assistant director, division of traffic movement, at Washington, and held that position until his resignation in September, 1944, to return to the New York Central as foreign freight traffic manager at New York, the post he held at the time of his recent appointment. Mr. Baylis will continue general supervision over that department.

S. E. Franey has been appointed foreign freight agent for the Louisville & Nashville, with headquarters at New York.

Thomas S. Acheson, general agricultural agent, Western Lines, of the Canadian Pacific, with headquarters at Winnipeg, Man., has retired after more than 50 years of service.

George H. Ingalls, general freight agent of the New York Central, at Washington, D. C., has been promoted to assistant to the freight traffic manager, with headquarters at Cincinnati, Ohio.

Warren H. Turner, general freight agent of the Atchison, Topeka & Santa Fe, at Topeka, Kan., has been promoted to freight traffic manager, with the same headquarters, succeeding **M. C. Burton,** who

Warren H. Turner

has retired after 45 years of service. **Ralph E. Brooks,** assistant general freight agent, has been advanced to general freight agent, with headquarters as before at Topeka, replacing Mr. Turner. Mr. Turner was born at Burlingame, Kan., on June 1, 1891, and entered railway service in 1907 as an office boy on the Santa Fe at Topeka. He later held various minor positions until 1920 when he was promoted to division freight agent at Atchison, Kan. Later he was transferred to Topeka and then to Kansas City, Mo., and in 1938 he was advanced to assistant to the vice-president, traffic, with headquarters at Chicago. In October, 1939, Mr. Turner was promoted to the position he held at the time of his new appointment.

George A. Lamb, whose appointment as coal traffic manager of the Erie, with headquarters at Cleveland, Ohio, was announced in the July 6 issue of *Railway Age,* was born on January 6, 1894, at Chicago, and entered railroading in 1908 as a messenger for the Erie at Chicago. After holding various positions for the tariff bureau there, he became traveling dairy agent in 1915, then went to Cleveland as traveling freight agent in 1920. Mr. Lamb was named division freight agent at Buffalo, N. Y., in 1927, transferring to Scranton, Pa., in 1931, then advancing to assistant to traffic vice-president at Cleveland in 1936. He became assistant general freight agent at Pittsburgh, Pa., in Jan-

George A. Lamb

uary, 1941, and in March of that year, freight traffic manager at Cleveland. Mr. Lamb maintained the latter post until his recent appointment became effective on July 1.

Homer D. Hanscom, traveling freight and passenger agent of the Great Northern at Los Angeles, Cal., has been promoted to general agent, with headquarters at Klamath Falls, Ore., succeeding **Harry I. Wayne,** who has resigned.

Charles R. Martin, whose appointment as freight traffic manager of the Erie, with headquarters at Cleveland, Ohio, was announced in the July 6 *Railway Age,* was born on March 20, 1900, at Fredonia, N. Y., and entered railway service in 1917 as a station helper for the Erie at Forestville, N. Y. There he advanced in 1918 to assistant foreman, maintenance of way department. He subsequently held a number of clerical posts at various points until 1923, when he was named commercial

Charles R. Martin

agent at Cleveland. Mr. Martin was named traveling freight agent there in 1927, general agent at Columbus, Ohio, in 1936, division freight agent at Youngstown, Ohio, in 1941, general agent at Albany, N. Y.,

News Department continued on next left-hand page

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in March, 1942, and division freight agent at Jamestown, N. Y., in September, 1942. He was promoted to assistant general freight agent at Cleveland in 1943, and held this post until his recent appointment.

E. Earl Spencer, secretary to the chief executive officer of the Missouri Pacific at St. Louis, Mo., has been promoted to assistant general passenger agent, with the same headquarters. **J. C. Woodward,** division passenger agent at San Antonio, Tex., has been transferred to Austin, Tex., succeeding **Milton L. Morris,** who has retired.

Charles C. Correll, division freight agent of the Southern at Knoxville, Tenn., has been appointed assistant freight traffic manager, with headquarters at Raleigh, N. C., succeeding **John H. Andrews,** who has retired. **Clyde M. Patton** has been named to succeed Mr. Correll at Knoxville.

Mr. Andrews was born on March 9, 1876, at Raleigh, and was graduated from the University of North Carolina in 1897, entering railroad service that year as office boy for the Southern at Raleigh, and later serving successively at that point as file clerk, stenographer and rate clerk. On July 1, 1904, he became traveling freight agent at Greensboro, N. C., subsequently becoming commercial agent at Raleigh, and division freight agent, with the same headquarters, on November 15, 1912. Mr. Andrews was appointed assistant general freight agent at Mobile, Ala., on August 1, 1916, and during the period of governmental control of railroads, he served as division freight agent of the Southern at Mobile, being transferred to Greensboro, N. C., on November 17, 1918, and to Raleigh on March 1, 1920. Mr. Andrews served in the latter post until 1943, when he became assistant freight traffic manager. His retirement was effective on August 1.

ENGINEERING & SIGNALING

M. E. Moyer, whose appointment as communications engineer on the Chicago & North Western, with headquarters at

M. E. Moyer

Chicago, was reported in the *Railway Age* of July 20, was born on September 8, 1895, at Wakarusa, Ind., and served with the Western Union Telegraph Company between 1916 and 1939, holding the position of assistant general manager of that company, at Omaha, Neb., on the latter date. Mr. Moyer entered railway service on November 6, 1939, as assistant superintendent of telegraph and signals of the Chicago & North Western, with headquarters at Chicago, which position he held at the time of his latest appointment.

C. O. Jett has been appointed system telegraph and telephone engineer of the Union Pacific, with headquarters at Omaha, Neb. Mr. Jett was formerly with the Bell Telephone System, and the U. S. Forest Service. During World War II, he was a radar engineer in the War Department at Washington, D. C.

Blair Blowers, whose appointment as chief engineer maintenance of way (system) of the Erie, with headquarters at Cleveland, Ohio, was announced in the *Railway Age* of July 6, was born on April 28, 1893, at Troupsburg, N. Y., and entered railroading as a rodman for the Erie in 1912, becoming assistant estimator in 1913 and head of engineering corps in 1917. From 1917 until 1919, Mr. Blowers served in the United States Army, then returned to the Erie in his former post. Later in 1919,

Blair Blowers

he was advanced to general yard foreman, then became track supervisor in 1920, assistant engineer in 1922, and assistant division engineer in 1925. He served as division engineer at Jersey City, N. J., and Hornell, N. Y., from 1927 until 1942, when he was named acting engineer maintenance of way, western district, at Youngstown, Ohio. He was named engineer, maintenance of way, western district, at Youngstown, in 1944, and maintained this post until his recent advancement, effective July 1.

O. S. Tomkins, whose appointment as signal engineer of the Chicago & North Western, with headquarters at Chicago, was reported in the *Railway Age* of July 20, was born on August 25, 1881, at Ashland, Wis., and was educated in the public and high schools at Ashland, at Lawrence university, Appleton, Wis., and the University of Wisconsin. He worked as an electrical apprentice during vacations and spare time while attending school and college, later serving as an electrician for the Lake Superior Iron & Chemical Company, Ashland, and as chief electrician for the Ashland Light, Power & Street Railway Company and the Badger Electric Company. Mr. Tomkins entered railway service on August 19, 1913, as a signal helper with the Chicago & North Western, subsequently serving as signal maintainer, gang foreman, division signal foreman, chief clerk to the signal engineer, signal inspector, assistant signal supervisor of the Chicago terminal, and signal supervisor of all lines west of Boone, Iowa, comprising the West Iowa,

O. S. Tomkins

Sioux City, Eastern Black Hills, Wyoming and part of the Northern Iowa divisions. In 1926 he was transferred to the Iowa lines east of Boone. On January 1, 1928, he was promoted to general signal inspector, and on October 20, 1937, to assistant signal engineer. On November 1, 1939, coincident with the combination of the telegraph and signal departments on the North Western, Mr. Tomkins was promoted to assistant superintendent of telegraph and signals, the position he held at the time of his recent appointment.

Irwin H. Schram, whose appointment as chief engineer of the Erie, with headquarters at Cleveland, Ohio, was announced in the July 6 issue of *Railway Age,* was born at Milwaukee, Wis., on October 14,

Irwin H. Schram

1888, and was graduated from the Armour Institute of Technology, Chicago, Ill., with the B. S. C. E. degree. He entered railroading in 1908 as a rodman for the Erie, subsequently serving as transitman and

News Department continued on next left-hand page

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assistant engineer, and advancing to the post of division engineer in 1916. He became trainmaster in 1918, terminal superintendent in 1920, and regional engineer in 1921, serving in the latter post at Hornell, N. Y., and Chicago. In 1927, Mr. Schram was named engineer maintenance of way at Hornell, transferring to Jersey City, N. J., in 1932. He was appointed acting chief engineer maintenance of way at Cleveland in 1943, and became chief engineer maintenance of way there in 1944, maintaining the latter position until his recent promotion.

M. B. Allen has been appointed division engineer on the New York, Chicago & St. Louis, with headquarters at Frankfort, Ind., succeeding **R. E. Oberdorf,** who has been transferred to the Lake Erie & Western district.

Harry J. Weccheider, whose appointment as engineer maintenance of way, western district of the Erie, with headquarters at Youngstown, Ohio, was announced in the July 6 *Railway Age,* was born on May 13, 1895, at Buffalo, N. Y., and entered railroad service in 1915 with the Erie. After serving as timekeeper, section foreman, and general foreman, he was appointed track

Harry J. Weccheider

supervisor at Susquehanna, Pa., in 1923. He was advanced to general roadmaster at Youngstown, in March, 1928, then to division engineer at Meadville, Pa., in December of the same year, transferring to Jersey City, N. J., in 1942. Mr. Weccheider maintained the latter position, in which he held jurisdiction over the New York division and side lines, until his recent promotion, which became effective July 1.

Welles M. Post, signal engineer of the Pennsylvania, with headquarters at Philadelphia, Pa., has retired. Mr. Post was born on July 10, 1876, at Andover, Conn., and entered the signal department construction forces of the New York, New Haven & Hartford in May, 1896. He was later appointed batteryman and then promoted to maintainer. In 1900 he was appointed division signal foreman on the same road, resigning in June, 1905, to become a circuit draftsman in the signal engineer's office of the Pennsylvania. In February, 1906, he was promoted to assistant supervisor of signals on the West Jersey & Seashore (part of the Pennsylvania), and in December of that year, was transferred to the Pittsburgh division as assistant supervisor of signals. In February, 1909, he was promoted to supervisor, having jurisdiction over the Chautauqua division, and in June of the same year he returned to the signal engineer's office as supervisor of signals. One month later he became supervisor of signals of the New York division, and in July, 1916, he returned to the signal engineer's office as signal inspector of the Eastern lines. In January, 1917, he became assistant signal engineer of the Eastern lines, and from February, 1918, to September, 1918, he was assistant superintendent of the Middle division. From September, 1918, to March, 1920, he was assistant superintendent of the Pittsburgh division, and on the latter date he became superintendent of telegraph and signals on the Central region. In 1925 Mr. Post was promoted to assistant chief signal engineer, and in 1937 was appointed signal engineer, which position he held until his retirement.

MECHANICAL

Colonel **Frank E. Cheshire,** formerly a master mechanic of the Missouri Pacific, has been appointed chief mechanical officer of the Chicago, Indianapolis & Louisville, with headquarters at Lafayette, Ind.

PURCHASES AND STORES

Alfred N. Laret, assistant chief purchasing officer of the St. Louis-San Francisco at St. Louis, Mo., has been promoted to chief purchasing officer, with the same headquarters, succeeding **Benjamin T. Wood,** who has retired.

Albert S. Galey, whose appointment as general storekeeper, eastern lines, of the Canadian Pacific, with headquarters at Montreal, Que., was announced in the June 8 *Railway Age,* was born in September, 1885, and first joined the C. P. R.

Albert S. Galey

in 1909 as a storeman at McAdam Junction, N. B. He advanced successively through the following posts: storekeeper at Brownville Junction, Me., in 1910; foreman, stores department at Montreal in 1912; storekeeper at McAdam Junction in 1915, at Brownville in 1919, and at McAdam Junction in 1928; district storekeeper at McAdam Junction in 1929, transferring to North Bay, Ont., in 1936; and storekeeper at Winnipeg, Man., in 1939. Mr. Galey was promoted to assistant to the general storekeeper at Montreal in 1941, and held this position at the time of his recent appointment as general storekeeper, astern lines.

SPECIAL

Francis B. Lewis, mechanical engineer of the Union Pacific, has been appointed general safety agent, with headquarters as before at Omaha, Neb.

T. S. Woods, manager of personnel of the Baltimore & Ohio Chicago Terminal, has been appointed assistant to the director of personnel of the Baltimore & Ohio, with headquarters at Baltimore, Md., a newly-created position. Mr. Woods' previous position has been abolished.

A new five-man "President's Committee" has been created by the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Chicago. The committeemen will work full time and their duties will include research work, study and adoption of uniform methods, investigation of office procedure, maintenance and operating practices, employee relations and other assignments.

Members of the committee and their previous titles are as follows: Chairman **C. E. Crippen,** assistant division superintendent at Perry, Iowa; **L. B. Horton,** traveling freight agent, with headquarters at Kansas City, Mo.; **R. P. Kauppi,** assistant chief disbursements accountant, Chicago; **F. Wood,** inspector of stores, Milwaukee; and **William Kilimann,** assistant engineer of tests, Milwaukee. Under the supervision of President H. A. Scandrett, the newly-formed committee will be directed by Vice-president J. W. Severs.

OBITUARY

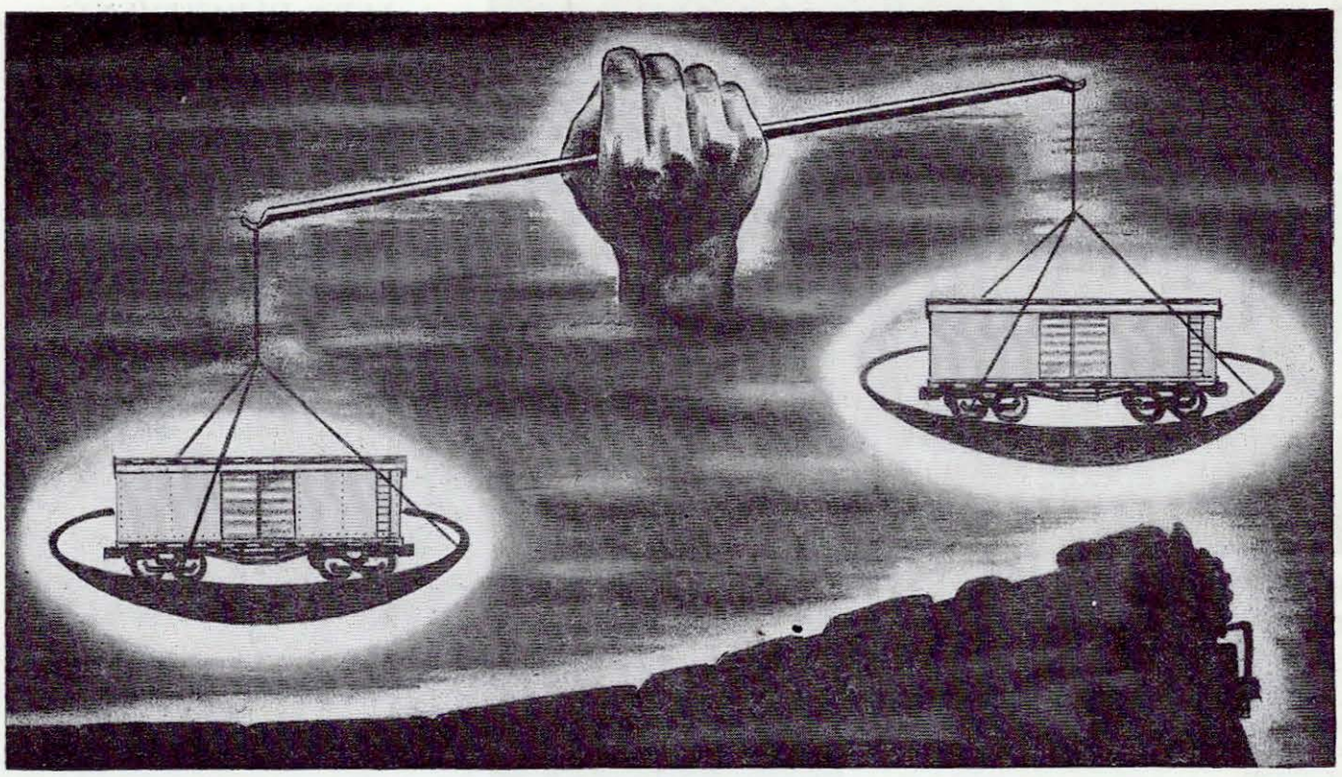
Richard D. Overholt, division engineer on the Canadian Pacific, at Saskatoon, Sask., died recently in that city.

A. D. Bell, assistant passenger traffic manager of the Missouri Pacific, with headquarters at Houston, Tex., died recently in a hospital at Palestine, Tex.

H. H. Larimore, general attorney and interstate commerce counsel of the Missouri Pacific at St. Louis, Mo., died in a hospital in that city recently.

Paul Shoup, who served as president of the Southern Pacific from 1929 to 1932, and retired from railroading as vice-chairman in 1938, after 47 years' service, died in a Los Angeles, Cal., hospital on July 30. His age was 72.

Alexander P. Gilbert, who retired as general freight traffic manager of the Chesapeake & Ohio, with headquarters at Richmond, Va., in 1940, died at his home there during the last week of July. He was 75 years old.



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Railroad equipment manufacturers are finding that the slightly higher cost of Inland Hi-Steel is offset by the saving in weight alone . . . that its other advantages such as ease of fabrication and great corrosion resistance make it the most economical steel for the job. Nearly all forms of steel rolled by Inland are available in Hi-Steel, including Hot and Cold Rolled Sheets and Strip, Structural Sections, Plates, Bars and Bar Shapes.

Inland engineers and metallurgists will be glad to show you how others have profited by the use of Hi-Steel . . . show you how to best adapt it to your requirements. Write for booklet on Inland Hi-Steel.

There is no traffic revenue from dead weight tons, so why carry them when Inland Hi-Steel can turn them into pay load tons.

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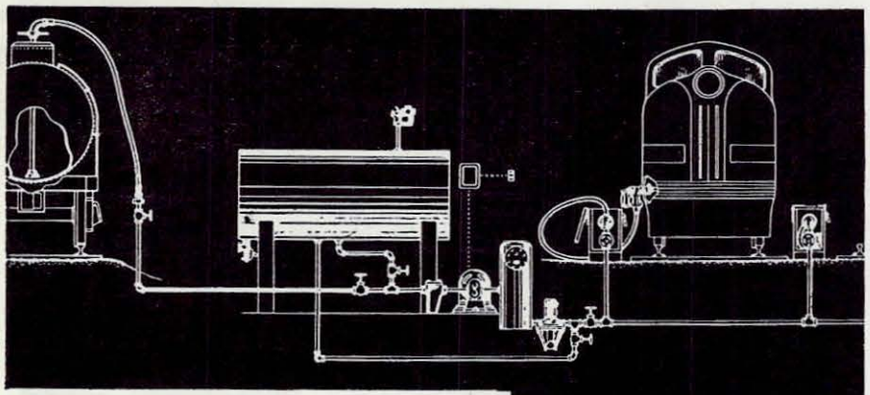

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. . . . combination tank car unloading and locomotive fueling system utilizing the same power pump and metering equipment. Fuel is drawn from a tank car and delivered by pump to storage tank. Fueling connections and hose are in an above-ground box with cover.

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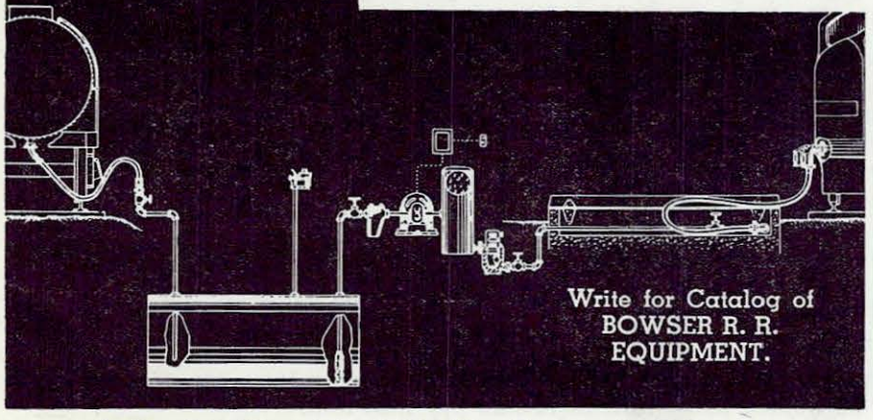

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NEWS DEPARTMENT

(Continued from page 201)

R. C. C. Distribution

The Railroad Credit Corporation on July 31 will make a liquidating distribution of 4 per cent of its fund as of June 30, amounting to $2,886,586.30, according to President E. G. Buckland.

Of this amount, $2,863,156.35 will be paid in cash and $23,429.95 will be credited on carriers' indebtedness to the corporation. This will bring the total amount distributed to $72,968,971.53, or 99½ per cent of the original fund contributed by carriers participating in the "marshalling and distribution plan" of 1931. Of this total, $44,205,852.32 will have been returned in cash and $28,763,119.21 in credits.

1945 Commodity Statistics by Geographical Areas

The Interstate Commerce Commission's Bureau of Transport Economics and Statistics has made public its statement No. M-550 for the year 1945, showing for Class I roads the tons of revenue freight originated and terminated in carloads by classes of commodities and by geographical areas. The commodity-group figures total to 1,404,080,159 tons originated and 1,309,423,863 tons terminated.

The "geographical areas" breakdown is by states, except that the six New England states are grouped together. The big originator and terminator is Pennsylvania, where 229,664,203 tons originated and 171,345,591 tons terminated last year. Pennsylvania also originated and terminated forwarder traffic amounting to 130,882 tons and 54,918 tons, respectively. Pennsylvania, however, did not lead in forwarder traffic, the largest originator in that category being Illinois with 911,298 tons originated and 680,129 tons terminated.

Illinois also led as the largest originator of agricultural products with 12,945,951 tons and as the biggest originator of animals and products with 2,950,170 tons, while Minnesota, with 14,141,681 tons, was the leading terminator of agricultural products and New York, with 3,226,085 tons, was the foremost terminator of animals and products.

Pennsylvania was the leading originator and terminator of mine products with 170,218,519 tons and 112,901,415 tons, respectively, and also led the manufacturers and miscellaneous group, with 56,291,331 tons originated and 45,803,487 tons terminated. Oregon, with 10,221,486 tons originated, and Washington, with 7,093,991 tons terminated, paced the forest products category.

Foreign Transportation Institute at American University

A foreign transportation institute, similar to a course in domestic transportation given earlier this year, will be offered by the American university, Washington, D. C., starting September 24. Agencies cooperating in the institute, to be directed by Professor L. M. Homberger of the univer-

sity faculty, will include the Association of American Railroads; the Office of Business Economics, Department of Commerce; the Division of Economics and Statistics, United States Maritime Commission; the National Federation of American Shipping and the Air Transport Association of America.

According to the university's announcement, the course is designed particularly for employees, and those desiring to become employees, of government transportation agencies, inland carriers interested in foreign transportation, ocean carriers and enterprises engaged in foreign trade.

Among the guest lecturers scheduled to address the institute are A. E. Baylis, assistant general freight traffic manager, New York Central, and Robert Ramspeck, executive vice-president, Air Transportation Association of America. R. V. Fletcher, vice-president in charge of research, A. A. R., will deliver the commencement address, "Research in Transportation," at the conclusion of the institute on October 24.

President Signs Rivers Bill

President Truman on July 24 signed H. R. 6407, the omnibus rivers and harbors bill which authorizes 61 projects estimated to cost a total of $520,395,070. No money for work on the projects covered is appropriated by this authorizations bill, congressional action on which was completed July 10 as noted in the *Railway Age* of July 13, page 67.

Locomotive Inspectors Wanted

The United States Civil Service Commission has announced that applications will be received until September 9 for positions as inspector of locomotives for the Interstate Commerce Commission, which positions will be filled after written examinations requiring two days. Openings will be available in various cities throughout the United States, the announcement said. The basic salary is $5,152 per year, subject to a 5 per cent retirement deduction and to such overtime payments for time over 40 hours per week as may be authorized. Details are available at any first-class or second-class post office.

Seeks Comment on Tentative Revision of Motor Accounts

The Interstate Commerce Commission's Bureau of Motor Carriers has sent to Class I motor carriers of property outlines of two tentative revisions of the uniform system of accounts for such carriers. One of the proposals sets up the accounts "along functional lines," while the other is based on the present system "with provisions made for subdividing certain accounts in order that costs may be computed for rate-making purposes."

The outlines went to the truckers with a July 25 notice wherein W. Y. Blanning, director of the bureau, asked that comment be submitted by September 1. Mr. Blanning explained that the "functional" set-up was prepared "in response to numerous suggestions from motor carriers and others," who advocate a system under which "each group of expense accounts will in-

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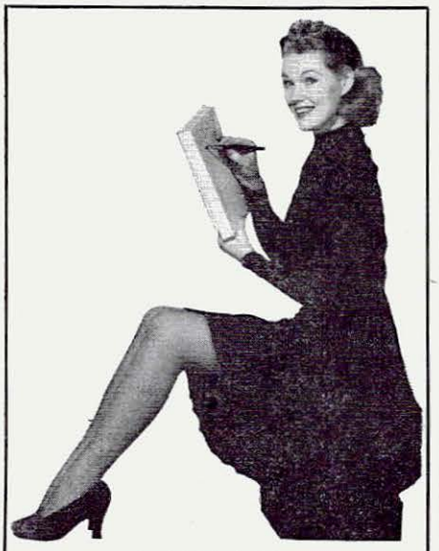

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clude, insofar as it is possible to do so, all elements of expense incident to the function performed, i. e., transportation, terminal, etc." Meanwhile, there was opposition to the functional system, so the bureau prepared also the other tentative revision based on the present system. In preparing the functional plan, it considered suggestions of truckers, members of the commission's staff, and the National Accounting Committee of American Trucking Associations. Mr. Blanning invited interested parties to make additional suggestions; and he emphasized that the tentative revisions "do not necessarily represent the views of the Bureau of Motor Carriers."

More Testimony Heard in Georgia Rate Case

As testimony of defendants in the suit of the state of Georgia against 20 railroads, alleging conspiracy in violation of the anti-trust laws, continued in New York before Lloyd K. Garrison, special master appointed by the Supreme Court of the United States, further refutation was offered of the state's assertion that the Association of American Railroads and the defendant eastern roads had at various times "coerced" the southern roads into making freight rate adjustments unfavorable to Georgia shippers or industries.

No rule of procedure of any railroad rate conference or committee was in any way changed by reason of the organization of the A. A. R. in 1934, Edwin H. Burgess, vice-president and general counsel of the Baltimore & Ohio, declared.

In fact, according to Mr. Burgess, who is a former chairman of the Traffic Executive Association—Eastern territory, and a former chairman of the Trunk Line Association, the conference method of dealing with rate proposals established by the eastern railroads continued in every respect the same as if the A. A. R. had not existed. The eastern railroads, he said, called upon A. F. Cleveland, vice-president in charge of the Traffic Department of the A. A. R., only "when it seemed desirable to have a conference between the eastern lines and those in the West or the South, which, as a matter of convenience, he was asked as a neutral individual to call and to help conduct by presiding."

Mr. Burgess said that "there is no appeal to the Association of American Railroads at any time or under any circumstances from the action of any committee or association in Official territory on any proposal," and "no such appeal is mentioned in any of the rules of procedure."

After stating that it has frequently been necessary to hold meetings of the traffic vice-presidents or other chief traffic officers of all the railroads to confer with respect to proposals and other traffic matters which were national in scope and required the concurrence of eastern, western and southern railroads, Mr. Burgess continued: "The only relation of the Association of American Railroads and of Mr. Cleveland as an A. A. R. officer to these meetings of chief traffic officers was purely ministerial in character; namely, to call the meeting, preside during it, and furnish to each attendant afterward a memorandum of the views expressed by the individual lines on the subjects that were considered.

"There were numerous occasions when the lines in the different territories were unable to see alike with respect to propositions that came before them in these meetings, and when this occurred the matter had to be left in a state of disagreement, for there was no action that could be taken by the Association of American Railroads or anybody else, unless or until someone chose to file a complaint with the Interstate Commerce Commission."

Mr. Burgess testified that during the time he was connected with the Traffic Executive Association—Eastern Territory, and the Trunk Line Association, "no officer or other representative of the Association of American Railroads ever undertook to or did give any directions to me about the discharge of my duties or about the action of the Eastern lines."

"Neither was any officer or other representative of the A. A. R. a member of, or ever attended or participated in, any of the meetings of the Traffic Executive Association or any subordinate committee," he stated. "No report was made of the action of the T. E. A. or of its subordinate committees to the A. A. R. or any of its representatives."

Declaring that the Traffic Executive Association "is not an entity with power to fix or control anything," Mr. Burgess said that "it is a conference of independent, individually-acting equals." Referring to votes taken on rate proposals at meetings of committees which consider rates, Mr. Burgess testified that "the purpose of the vote by members of a committee is merely to ascertain and make known the consensus of the views of the members."

Mr. Burgess was preceded by E. A. Hodkinson, a member of the Auxiliary Committee of the Trunk Line Association, and Lloyd E. Butler and William E. Tannehill, members of the Auxiliary Committee of the Central Freight Association, each of whom put into the record data indicating how rate proposals were disposed of by these organizations, resulting in many instances in rates favorable to the South.

"No railroad has ever dominated or coerced the Erie Railroad in rate matters, and the Erie has not, individually or in concert with other railroads, dominated or coerced any other railroad," L. B. Burford, retired assistant vice-president of the Erie, told the special master. The Erie, he said, has "time and again" taken independent action in the publication of rates contrary to recommendations of the Traffic Executive Association or subordinate rate committees.

He cited several typical cases of such action, and described two cases where the Erie assisted shippers in rate proceedings before the Interstate Commerce Commission which were inconsistent with views of some of the larger eastern railroads.

"No punitive action of any kind," Mr. Burford said, "has ever been taken against the Erie by the Pennsylvania, the New York Central or the Baltimore & Ohio railroads or other railroads because of the Erie's participation in rate proceedings on behalf of shippers. And that includes the routing of freight against the Erie."

New Canadian Wage Demand

The Brotherhood of Maintenance of Way Employees (A. F. of L.) has announced in Ottawa that notice has been served on the Railway Association of Canada for a wage increase of 20 cents an hour for some 25,000 railway workers.

The brotherhood made a similar application last year, first to the association and then to the Canadian War Labor Board. The board allowed an increase of two cents for a majority of the employees and up to five cents for others. George Clifford, secretary of the brotherhood central committee who made the announcement, said that board's award was "grossly inadequate."

Pipe Line for Sale

The government-owned, 179-mile Plantation Pipe Line Extension, constructed during the war to transport refined petroleum products from Greensboro, N. C., to Richmond, Va., has been declared surplus and is being offered for sale or lease by the War Assets Administration. The government spent $3,405,283 on the project, including pumping stations and housing facilities for employees.

The W. S. A. announcement said that "continued use of the line as an oil carrier or conversion for the transportation of liquefied petroleum gas, natural gas, or similar product is desired by the W. A. A. Policy Review Board." Also, operation of the property at its present sight, in whole or in part, "is preferred to its removal for relocation elsewhere."

O.P.A. Suspends Controls for Lake Contract Carrier Rates

Charges of water contract carriers operating on the Great Lakes were suspended from price control by the Office of Price Administration on July 26. The action resulted from O. P. A. studies indicating that the carriers would be entitled to increases in ceiling rates that would exceed the higher charges they were proposing to put into effect if the ceilings were suspended. The announcement recalled that, with the study then uncompleted, the lake carriers were excluded from O. P. A.'s May 29 action which suspended price controls on charges of all other water contract carriers except on shipments of coal and intra-harbor operations.

Judgment Against A. C. L. for Violating Service Order

Secretary W. P. Bartel of the Interstate Commerce Commission announced on July 29 that the commission had been informed that on July 20 in the Federal District Court for the Eastern District of North Carolina an order was entered in a civil suit against the Atlantic Coast Line for recovery of a total of $1,000 for a violation of the commission's Service Order No. 422. The alleged violation arose out of the failure of the A. C. L. to unload within a period prescribed in that order box cars at Savannah, Ga., which were destined for export.

A Watchman that Breathes and Sees *BUT*—Neither Sleeps nor Moves an Inch from One Spot

Since men are only human, and some fire equipment is actuated by men after the fire is discovered, it's mighty important that fire is detected when it begins to smolder or smoke. That's the vital job of the combined C-O-Two automatic smoke detecting and fire extinguishing system.

If you store valuable records, tracings or other materials in vaults or isolated spaces you should install C-O-Two. Smoke in a protected space is detected by the new C-O-Two industrial Smoke Detector. It is not dependent upon heat, and the fire is discovered in its incipiency, as smoke alone actuates the detector. The alarm sounds, pressure-operated releases automatically close windows, doors or dampers and a pressure-operated switch shuts off motors to stop ventilation. A time delay controls the discharge of dry, non-damaging, sub-zero carbon dioxide into the occupied area. The fire is under control.

For incipient or flash fires in bake ovens, spray booths, drain boards, dip tanks, flammable liquids and electrical machinery C-O-Two portables with the famous Squeez-Grip valve are recommended. Wheeled and hose units kill fires in seconds. All employ carbon dioxide, the fastest non-damaging extinguishing agent. C-O-Two engineers will help you plan modern fire protection. Write today for information.

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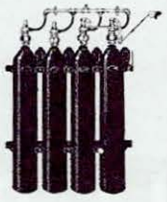

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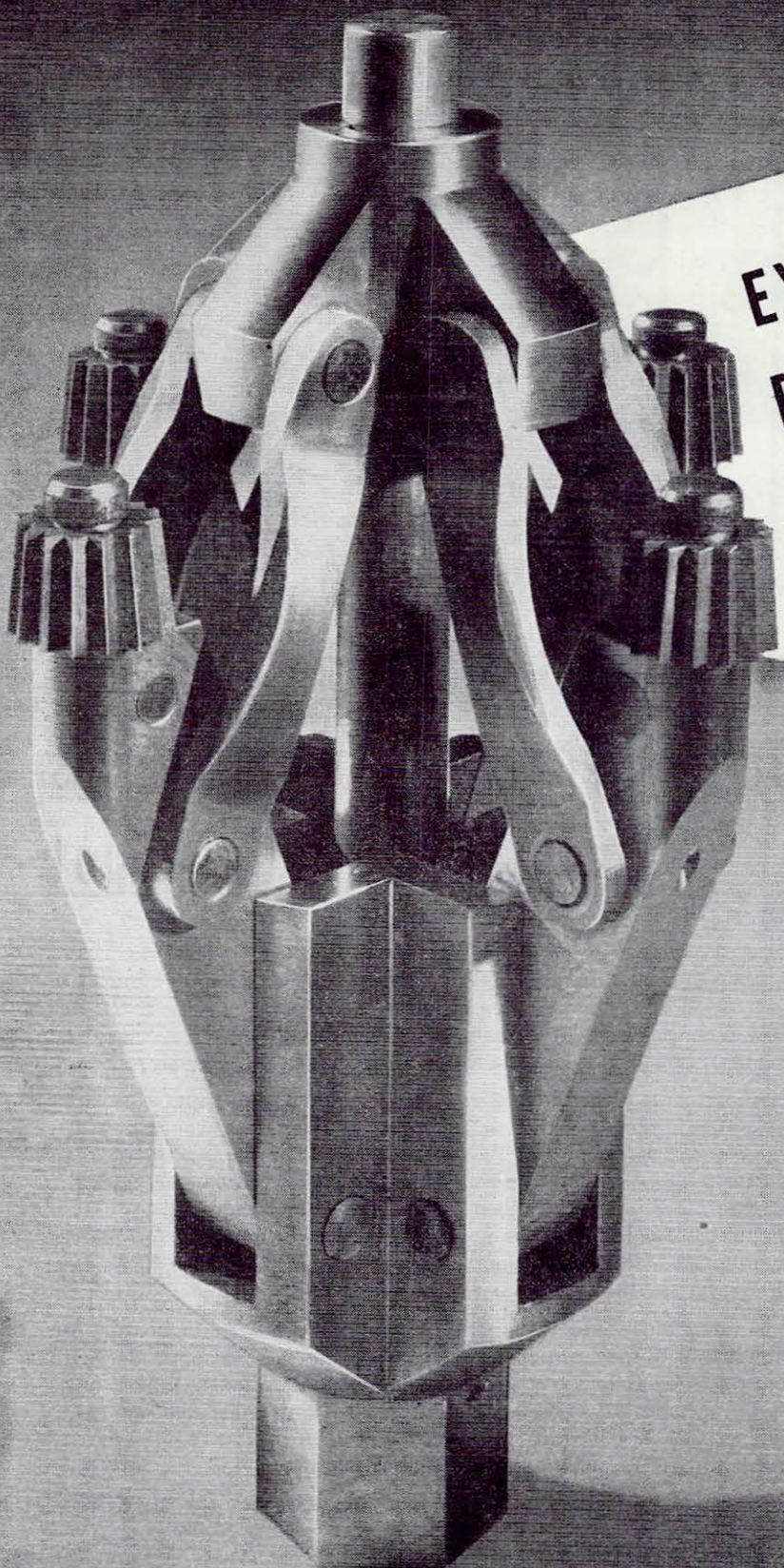

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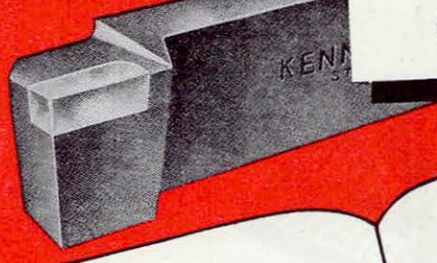
with "Clamped-On"
Kennametal blank

STYLE 11
with "Screwed-On"
Kennametal blank



STYLE 1

on Sandy Iron Castings

Turned cast iron piston trunks—21½" diameter x 45" long—high in silicon, manganese, and carbon; very sandy surface; chilled around port holes. Showed practically no wear after machining three complete castings. This was Kennametal's *new and improved* tungsten carbide Grade K6.

Other makes were unable to take shock of interruptions, or withstand the highly abrasive cutting—could not complete one casting.

on Tough, Aluminum Bronze

Rough turned scaly Ampco metal bar stock—6" diameter x 14" long—continuously for 8 days. After turning 224 pieces (equivalent to 85 miles of lineal cutting) Kennametal tool did not need regrinding.

With other tools only one-fourth as many pieces could be machined before resharpening was needed.

on Chrome Nickel Steel

Rough turned very scaly chrome nickel forging—2' diameter x 10' long—in 30% less time, and with triple the tool life obtained from other tools, which could not stand up under the plunge cut through scale.

on Monel Metal

Bored 4½" hole in 6' long solid monel metal forging, to accurate size, in 32 minutes. HSS tool required 10 hours; sometimes produced up to .040" taper, due to wear, which required reboring.

on 14% Manganese Steel

Successfully rough and finish bored and turned huge casting. (High manganese steel is usually ground rather than machined because it hardens under cutting tool pressure.)

on "Everyday" Jobs, Too

The tool that takes tough jobs in stride is the one to use on routine production runs where overall cost-per-piece is the important factor. This is conclusively proved by official reports covering consumption of cemented carbides used during the war for machining 105mm shells:

- Where cemented carbide tools other than Kennametal were used, average carbide consumption per shell produced was approximately 3 *calculated grams.*
- In typical plants using Kennametal exclusively, average consumption per shell was *only ½ gram.*

In other words—Kennametal Tools were up to 6 times as serviceable—a fact of utmost significance to all who must now manufacture post-war products—*economically.*

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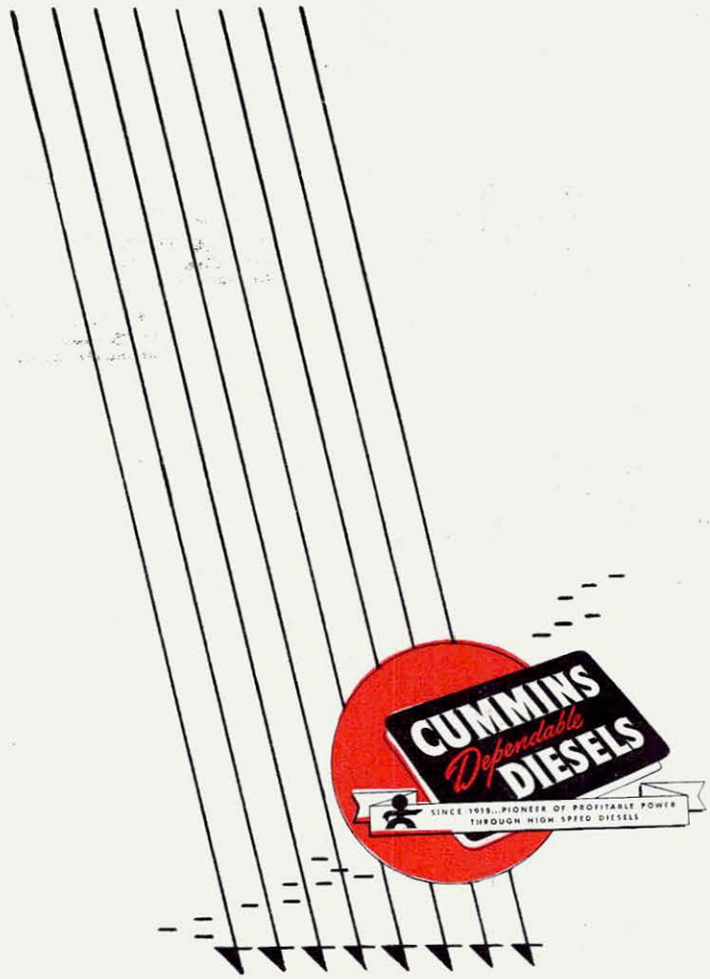
SUPERIOR CEMENTED CARBIDES
KENNAMETAL Inc., LATROBE, PA.



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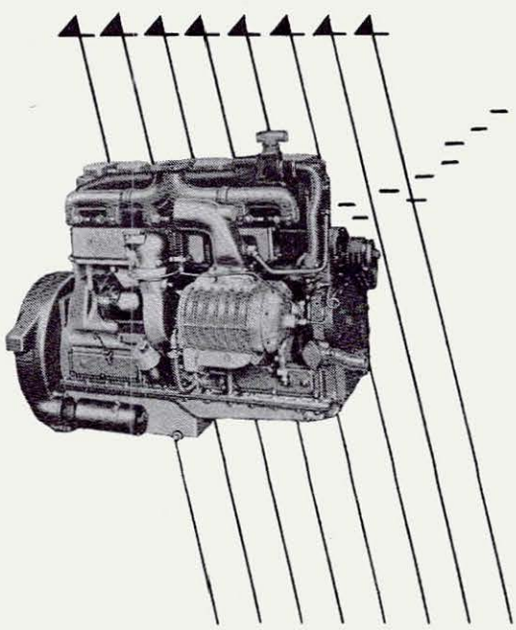
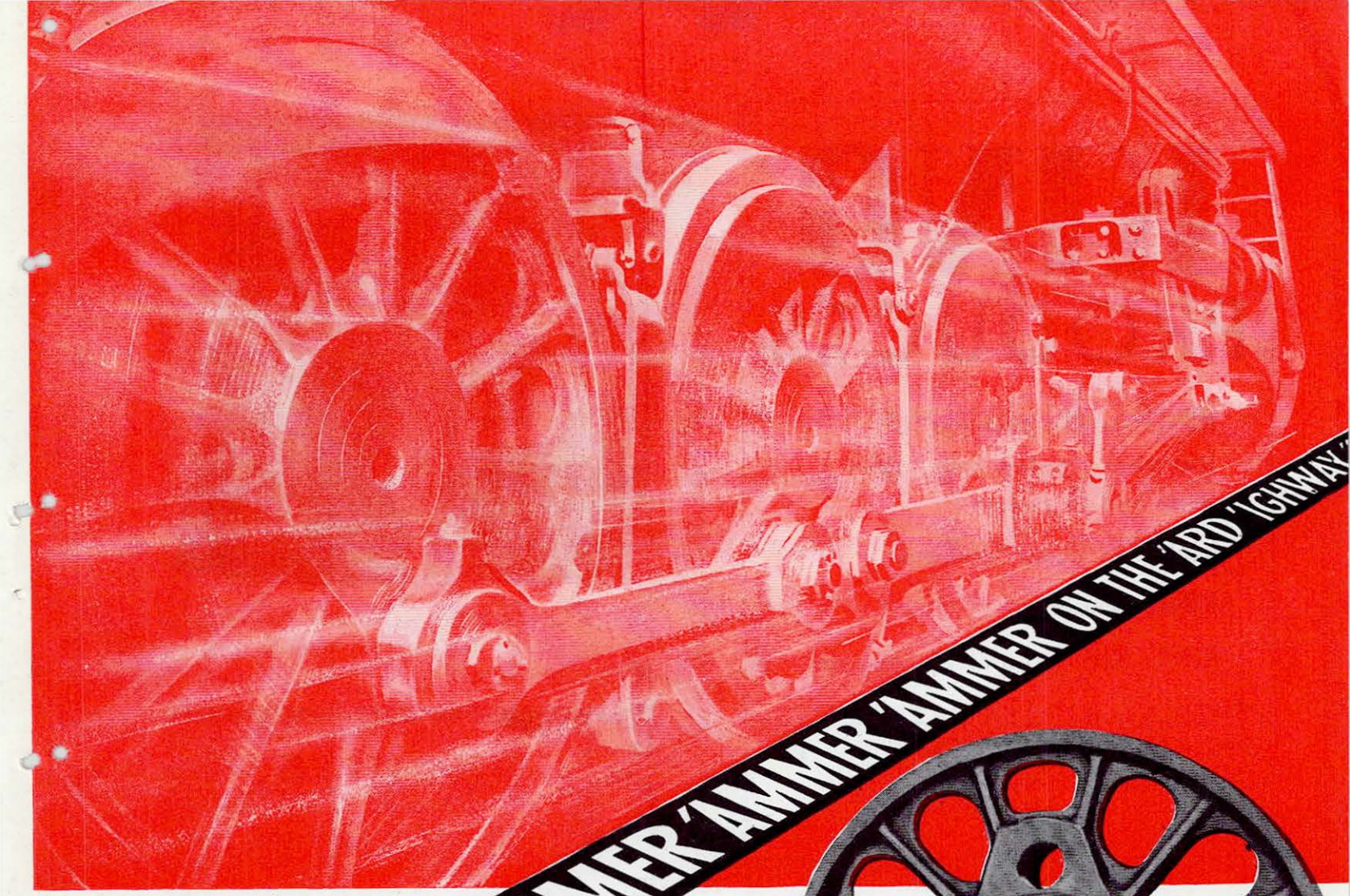
** Consult the Cummins Diesel Railroad Equipment Co., Inc., 1030 Leggett Avenue, New York 55, New York, for performance records in railroad applications.*





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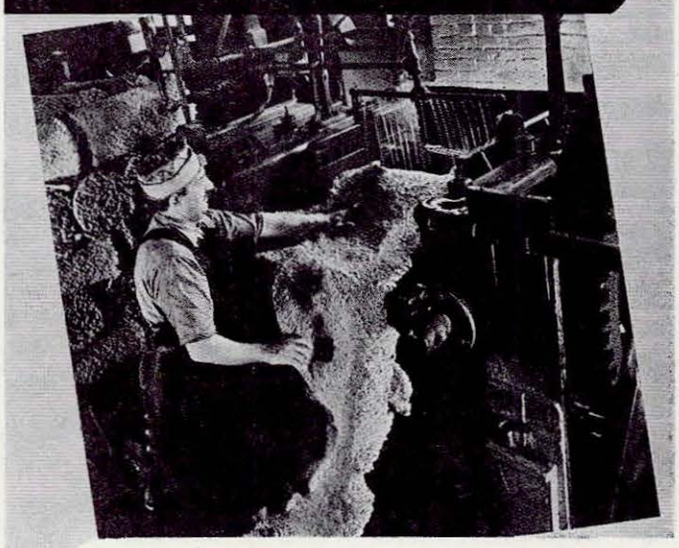

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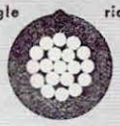

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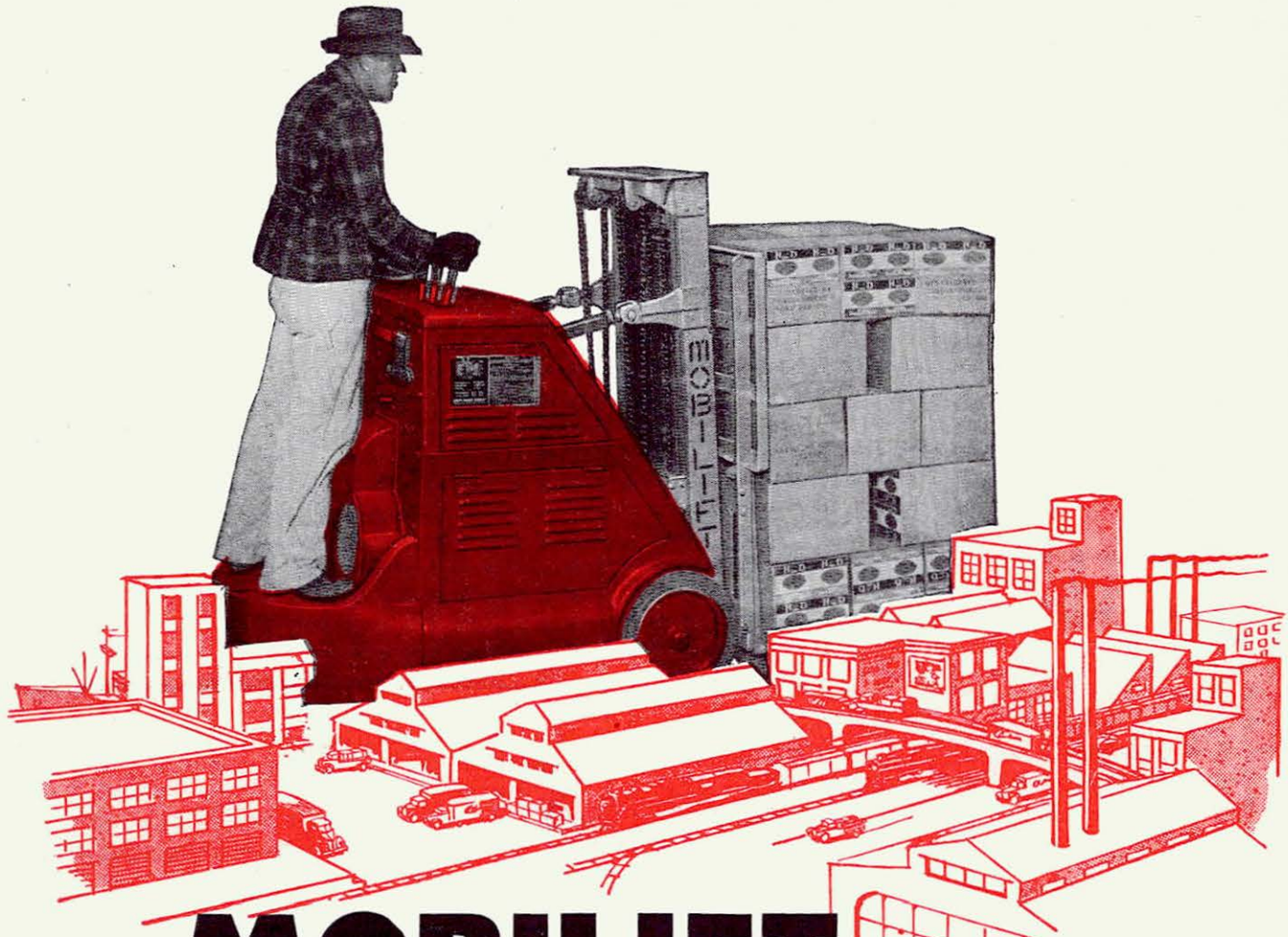

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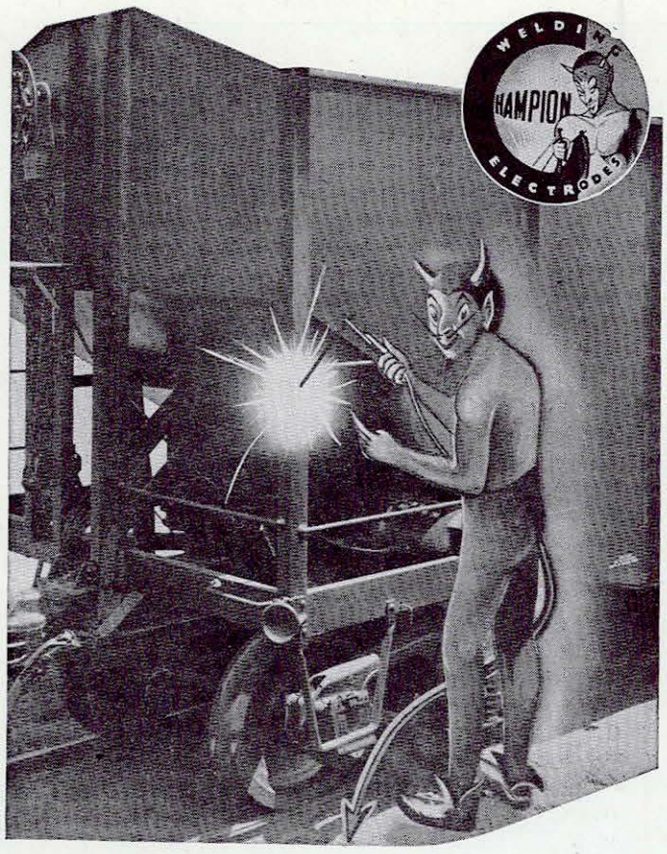

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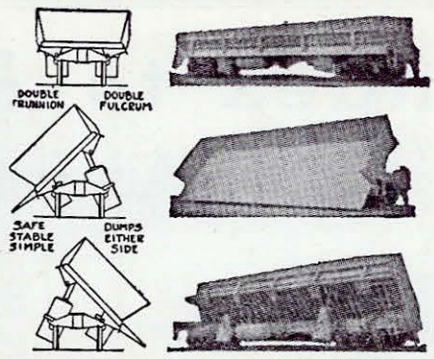

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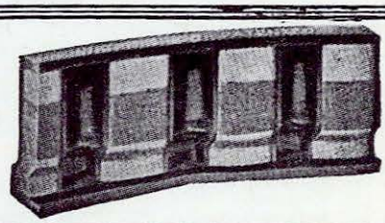

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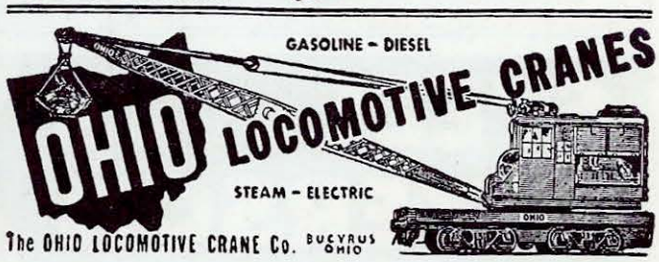

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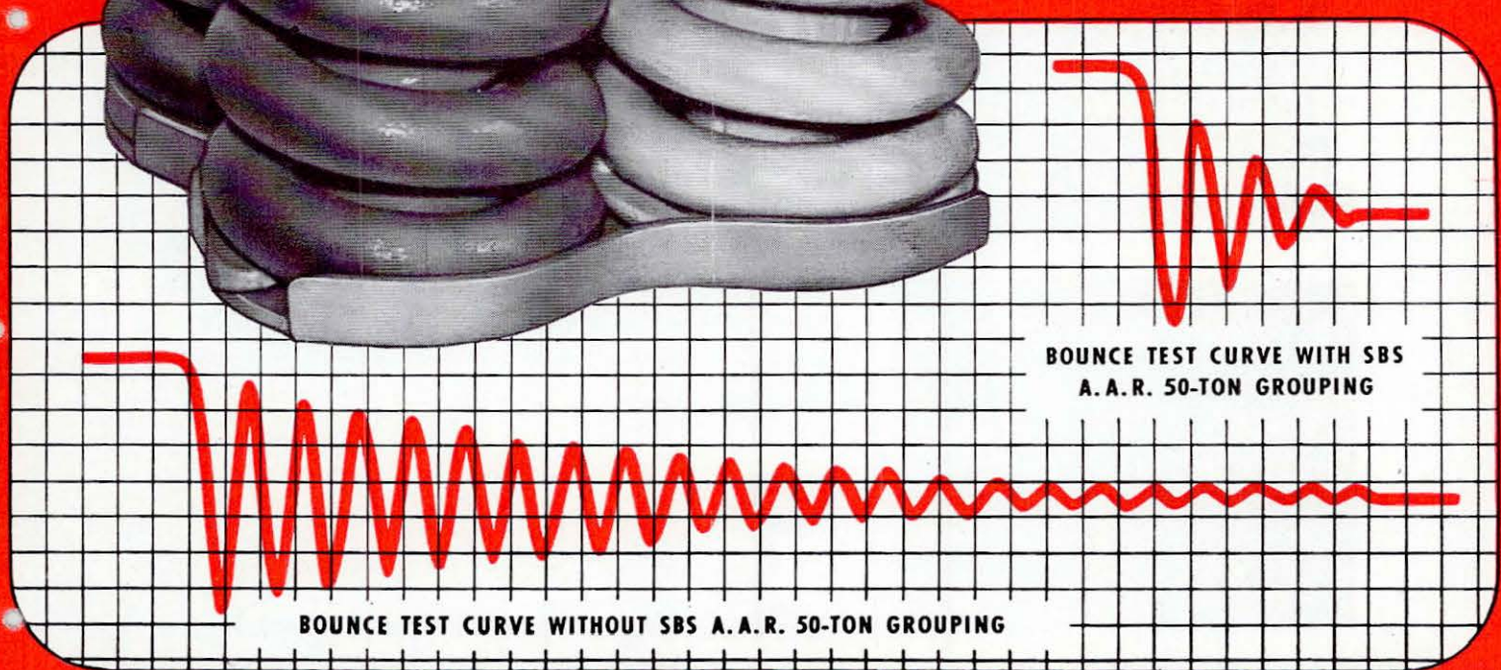

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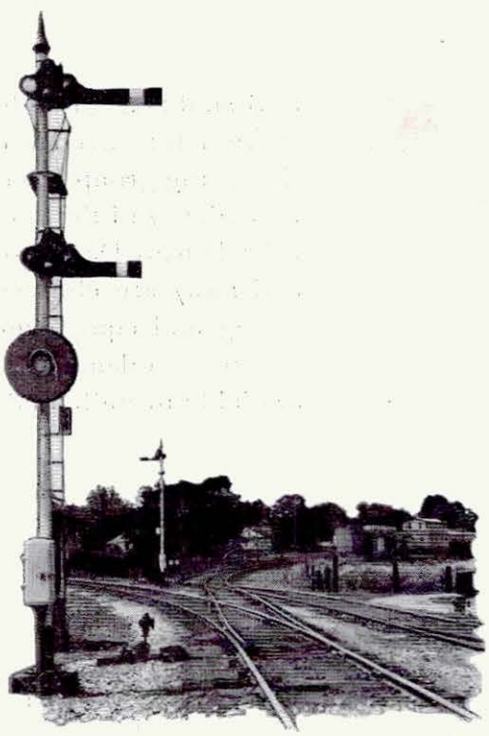

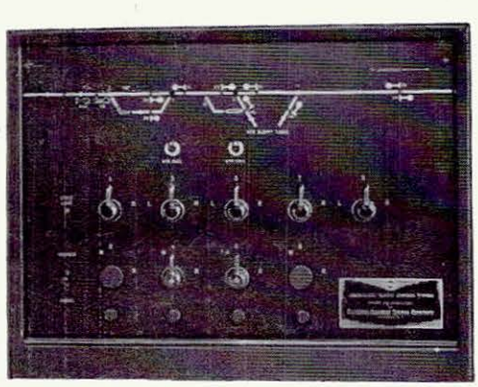

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